LOUDEN MACHINERY COMPANY

Perfect Barn Equipments

GUELPH

ONTARIO, CANADA

LOUDEN
MACHINERY
COMPANY

Perfect Barn Equipment

GUELPH
ONTARIO, CANADA

ILLUSTRATED CATALOGUE No. 4

LOUDEN MACHINERY CO.

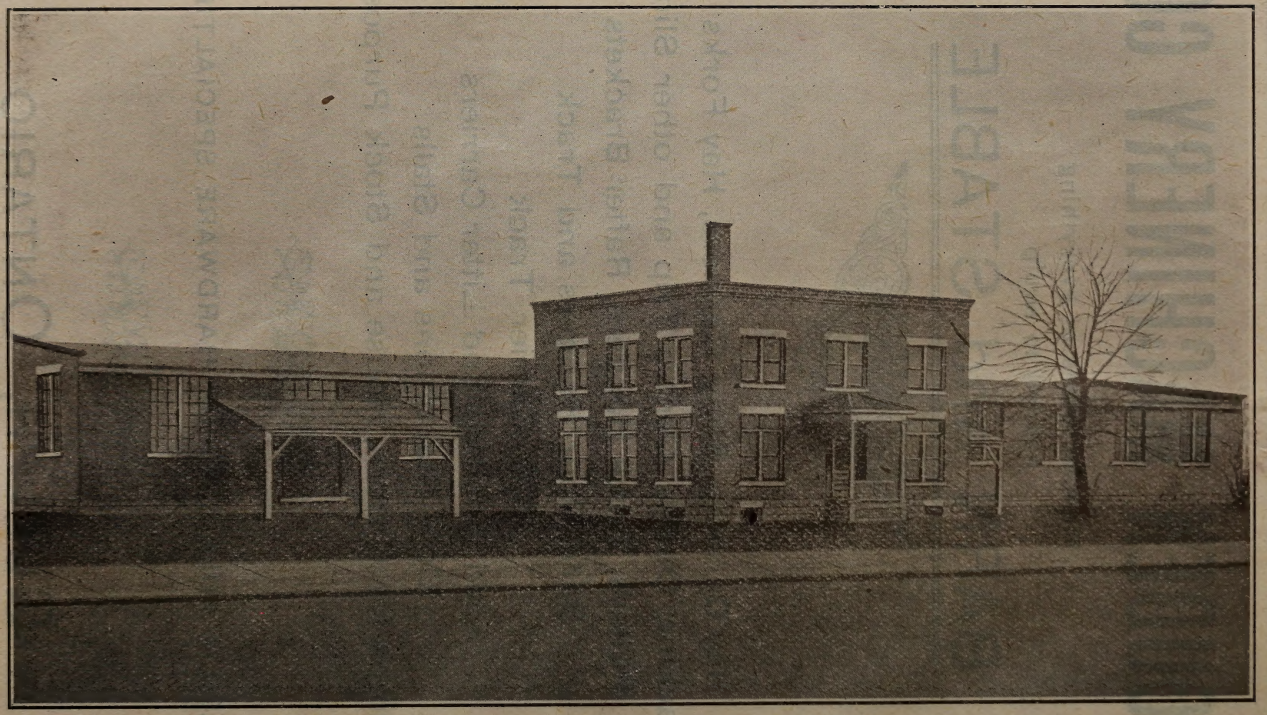
Manufacturers of everything
needed to equip

BARN and STABLE

Hay Carriers, Sling Carriers, Hay Forks
Stacking Outfits, Centre Trip and other Slings
Pulleys, Track Hangers, Rafter Brackets
Barn Door Hangers and Track
Hay Carrier Track
Feed, Ensilage and Litter Carriers
Cow Stanchions and Stalls
Pumps for Cistern, House and Stock Purposes

ALSO A FULL LINE OF HARDWARE SPECIALTIES

GUELPH, ONTARIO
CANADA



Plant of **LOUDEN MACHINERY CO.**, Guelph, Ont.

INTRODUCTORY

ON AUGUST 28, 1866, the first patent was issued on Louden goods. From that time to the present we have been busy manufacturing an ever increasing number of labor-saving appliances for barn and stable. The continually growing demand for our goods has shown us that our manufactures have found a secure place in the favor of the farmers of Canada. From coast to coast the name of Louden is known, and everywhere the Louden goods are acknowledged as the **best line of hay tools and stable fixtures made.** The result is that we have found our factory at Guelph entirely inadequate, and we have therefore **just completed building a new factory,** into which we have now moved. This factory is up-to-date in every particular.

We have always been prompt in our shipments, but we expect, with our new facilities, to be in a position to give better service than ever, while the **uniform high quality of our goods will be fully maintained.**

In Feed and Litter Carriers we would especially call your attention to our **New High Lift Chain Hoist,** and our method of hanging track in the yard. In haying tools our **New Cross Draft Carrier** is sure to prove attractive, while our **Louden Junior Sling Carrier** is steadily increasing in favor. We are now preparing to supply **Cow Stalls** of steel pipe and malleable castings, and have also enlarged our line of hardware specialities by adding the **Premier Pumps** and **Premier Rack Fixtures,** and the **Perfect Wire Stretchers.**

We solicit your orders, promising you that by **courteous treatment, careful attention** and **prompt shipment,** we will **try to show** our appreciation of them.

Thanking you for your past favors, we are

Yours obediently,

LOUDEN MACHINERY COMPANY

Louden Junior Steel Track Hay Carrier

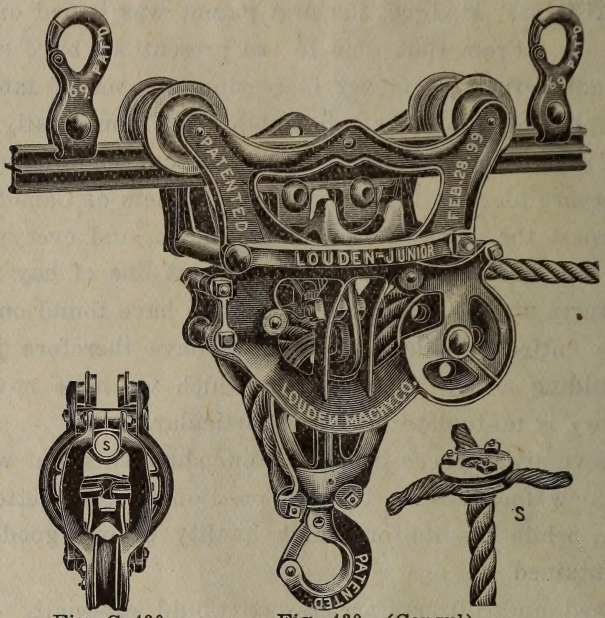


Fig. C 430 Fig. 430 (Consul)

THE STRONGEST SWIVEL CARRIER MADE

We are very proud of the reputation of this Carrier, which is without doubt the best Hay Carrier on the market. Other makers often try to recommend their goods by saying that they are as good as the **Louden Junior,** but the increasing demand for our Carrier has proved its superiority. It is simple and easy to work, but very strong. It has a positive, **never failing lock with a square catch which cannot wedge fast,** and it trips easily. **The frame cannot spread,** however heavily loaded, as the wheel arms are thoroughly braced, as shown in Fig. 7.

This cut gives an end view of the upper frame on all the **Louden Swivel Carriers.** The sides carrying the wheels are joined together by two end pieces A. These end pieces are bolted to the frame at the bottom, as shown in cut, and have arms extending upward, which are secured to the sides above, thus making the **strongest possible frame** and at the same time taking up very little space below the track. This car cannot be drawn past the stop block without swiveling it quarter round. **The bearings** are chilled and run on large malleable bushings recessed into the sides and bolted through. If oiled occasionally they will last for years.

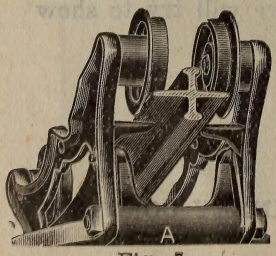


Fig. 7

Louden Junior (Continued)

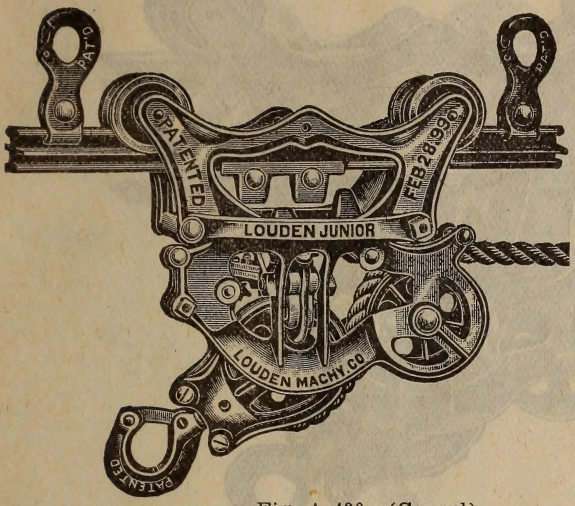


Fig. A 430 (Consul)

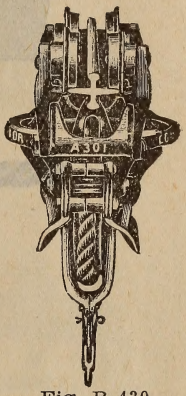


Fig. B 430

The end of the rope is fastened into the Carrier with our **Patent Swivel Iron Knot,** as shown in Fig. 430 S. and C., the end of the rope being fastened as shown in Fig. S. After passing through the **Tilting Eye S.** Fig. C., the iron knot then rests loosely on S., making a **complete swivel,** which lets all kinks and twists out of the rope. There is no other Carrier on the market that has a successful rope swivel. This is therefore a very favorable feature in our Carrier. Fig. A 430 shows the fork pulley locked in the car, and drawn to one side, in carrying a load over a beam, or in a mow which is nearly full.

Fig. B 430 is an end view, and Fig. C. 430 is a bottom view, showing the same car. You will notice in these the **wide, flaring mouth,** which insures the safe locking of the Fork Pulley. You will also notice the **great strength** of the Carrier.

REMOVABLE SPLICES

Fig. 633 represents our **Removable Splices,** which allow a section of track to be easily adjusted and removed, in a door way or other place where it is inconvenient to have a stationery track. These Removable Splices **hold the loose section firmly** in place, but they can be **easily lifted out to allow the door to shut.**

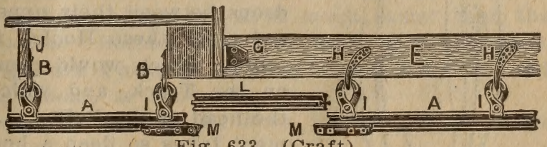


Fig. 633 (Craft)

Louden Junior Wood Track Hay Carrier

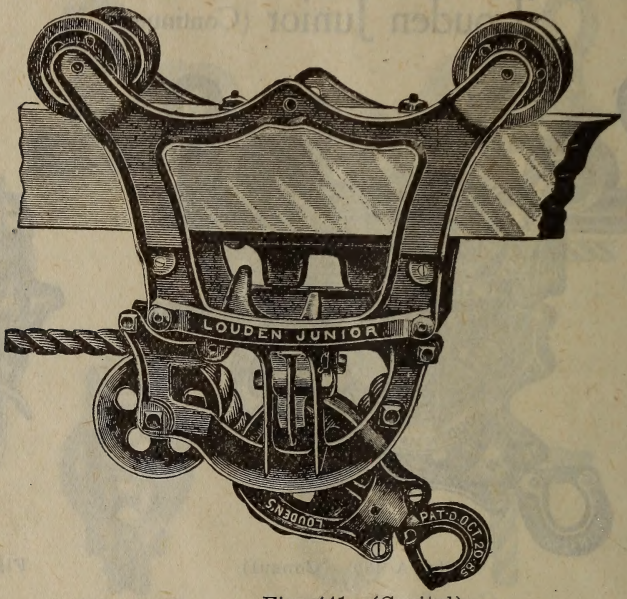


Fig. 441 (Capital)

The Carrier runs on our patent Double Beaded Track, but is also made to work on a 4 x 4 wood track, as shown in Fig. 441. The weight of the Steel Track Carrier complete with Fork Pulley, one Stop Block and two End Stops, Fig. 523, page 11, is 25 lbs. The Wood Track Carrier, with Stop Block and Fork Pulley, weighs 27 lbs.

The **Carrier is reversed** by simply changing the Pulley in the peak of the barn from one end of the track to the other, which can be done, with the aid of our Pulley Changer, without climbing. See Fig. 438, page 29.

Fig. 5

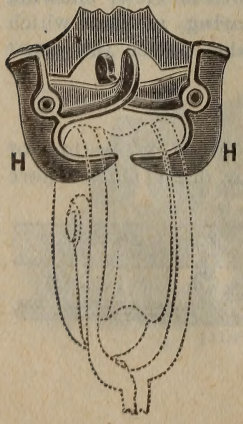


Fig. 5 shows our **Interlocking Grappling Hooks,** which are used in all the Louden Fork Carriers in connection with our **Round Top Fork Pulley,** shown in the dotted lines. The Interlocking Hooks are pivoted on opposite sides of the Carrier, and are so connected that they always act together when opening or closing. The Hooks take a deep hold in the side of the Pulley Frame and are securely held there by the Dog D, which drops between their upper ends. The Pulley is free to swing on these Hooks, thus doing away with a rigid pulley, which would cause the Carrier to tip and bind on the Track, and which is liable to break, or bend the head of the Pulley. At the same time, this arrangement takes so deep a hold on the Pulley that it is impossible for it to come out and drop the load.

Royal Steel Track Hay Carrier

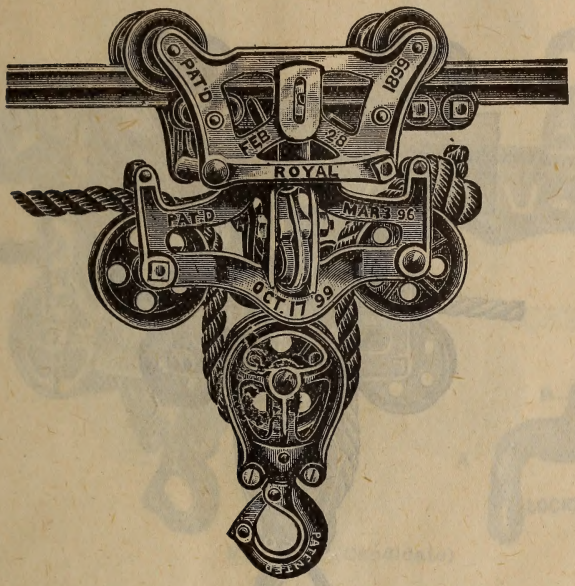


Fig. 489 (Charter)

The Royal is one of our best working Carriers. It is a **Combination Swivel and Reversible.** The bottom of the Locking Dog is circular, and it will work, no matter how the bottom part of the Carrier may be turned around. It is very short and compact, and will run with ease on a circle 10 ft. in diameter. It is therefore particularly adapted to work on a circular track in round barns, or on curved track with switches.

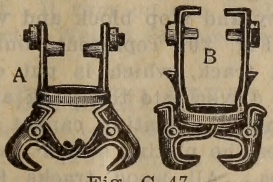


Fig. C 47

The Locking Dogs are provided with **rollers** to run up and down in grooves in the Carrier frame, which make them work much easier than the old way of sliding in the grooves. Besides this, the Royal has the **wide, flaring mouth** and the **Swinging Fork Pulley** of all the Louden Carriers, and **has our Interlocking Grappling Hooks,** as shown in Fig. C 47.

Cut A shows the Hooks open to receive the Fork Pulley, and B shows them in a closed position.

Royal Wood Track Hay Carrier

Fig. 490 (Cabin)

The Royal Carrier is made to run on our patent Double Beaded Steel Track as shown in Fig. 489, and on a 4 x 4 wood track, Fig. 490. When used with steel track it is furnished complete with fork pulley, stop block and two end stops, and weighs 24 lbs. When made for a wood track it is furnished with a fork pulley and stop block and weighs 27 lbs.

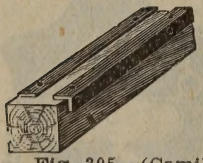


Fig. 305 (Camile)

Fig. 305 represents our **Angle Track Plating,** for wood track, which is put on with common 2½ inch nails driven into the track at right angles to each other so that the plating cannot come off. The angle also makes the plating stiff at the corners where the weight comes. All wood tracks for heavy work should be plated.

STRAIGHT HANG HOOKS FOR WOOD TRACK

These hooks are made of ½ inch iron, 12 inches long, although they can be furnished in various lengths.

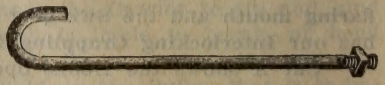


Fig. 371 (Cheese)

Duplex Steel Track Hay Carrier

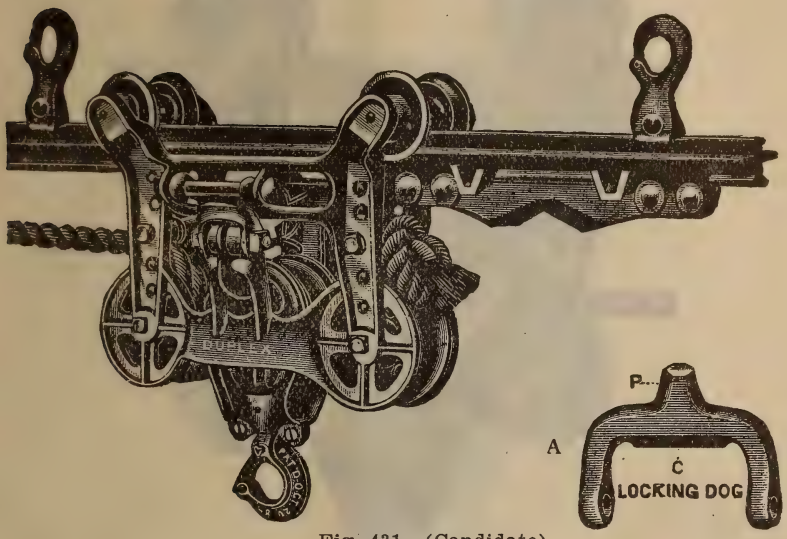


Fig. 431 (Candidate)

The Duplex is **not a Swivel Carrier** like the Royal and Louden Junior, but it is **reversible**, and is the easiest working Carrier made. It has **two locking dogs**, Fig. A 431, which are hinged at their outer ends to the Carrier **sides**, so as to stand at right angles to the stop block. It has two **interlocking grappling hooks** which engage the dogs at C, while the points P slide up in the inclines of the stop block and catch against its lugs. This gives the dogs a leverage and removes friction, and makes it decidedly the easiest working lock on the market. It runs on our Double Beaded Steel Track and is warranted in every respect. Weight complete with fork pulley, stop block and end stops is 24 lbs.

DOUBLE BEADED STEEL TRACK

Fig. 571 shows a section of our patent **Double Beaded Steel Track**, on which the Louden Junior, Fig. 430; Duplex, Fig. 431; Royal, Fig. 489, and Louden Junior Sling, Fig. 491, Carriers are built to operate. This track is also used for our Feed and Litter Carrier, Fig. 800, and Feed Carriers, Figs. 763, 764 and 804, and Merchandise Carrier, Fig. 769. It is made of the finest and **best high carbon steel**, and is the strongest hay carrier track made and the easiest to put into place.

Fig. 571 (Clara)

Duplex Wood Track Hay Carrier

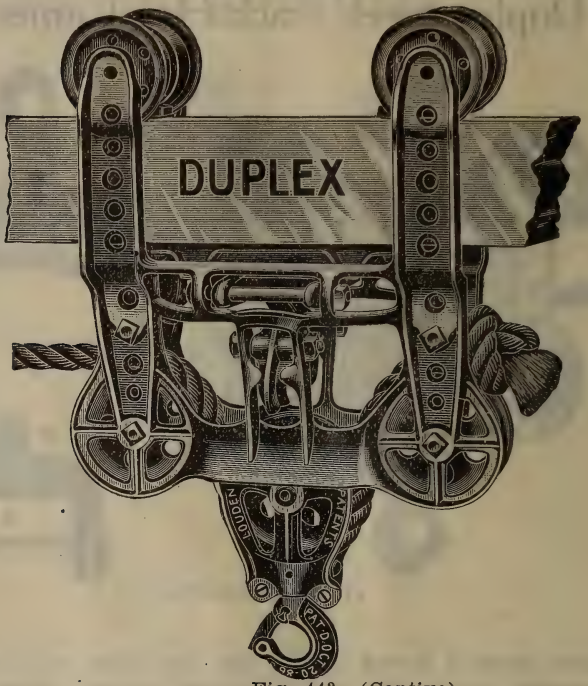


Fig. 443 (Captive)

It is also made to run on a 4 x 4 wood track and can be spread apart for a track slightly wider. Its weight, when complete with fork pulley and stop block for wood track, is 26 lbs.

Fig. 431 shows this car arranged for steel track, and Fig. 443 for wood track.

Fig. 380 shows our **Patent Extension,** for which we furnish malleable iron supports E, with two Track Hangers and two Hook Bolts. This support can be arranged for either steel or wood track as required. For longer and heavier extensions we furnish three track hangers and three bolt hooks. This is the most substantial extension support that can be put into a barn after it is built. **The wood piece B,** which extends back to second or third rafter in barn, as desired, **is held securely in position** to the end rafter **by the iron E.** and to the second and third rafters as shown by C. Collar beams may be used on the rafters as shown at D, to lower the rafter bracket, and so give the track the proper incline to run it the right distance under the wood extension piece B.

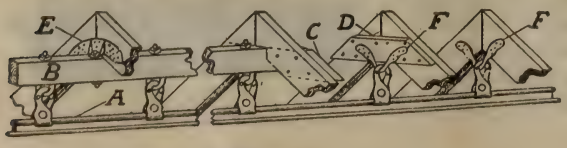


Fig. 380 (Cover)

Louden Senior Steel Track Hay Carrier

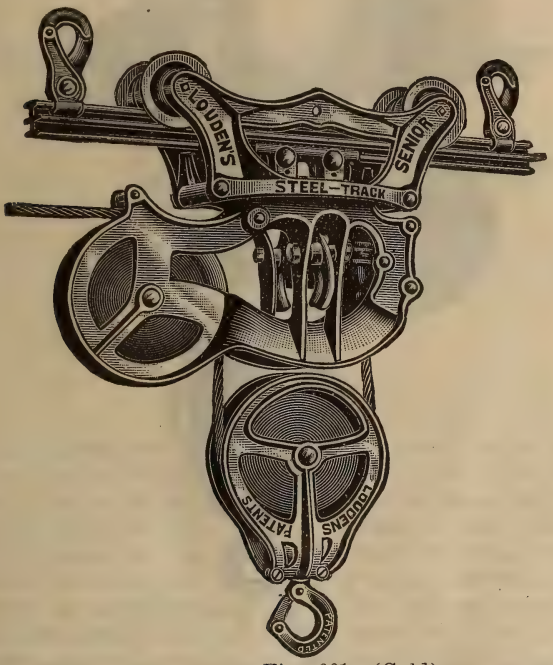


Fig. 661 (Gold)

The Louden Senior Steel Track Hay Carrier is similar to the Louden Junior Carrier, Fig. 430, as shown on page 4, but it is made larger and heavier and has a **7 inch sheave** fitted for **⅜ inch wire hoisting rope** instead of a common rope. A wire hoisting rope is much more durable than a common rope, and in many places it is much better. Where heavy work is required the Louden Senior Cable Carrier, with a flexible wire hoisting rope, is the best Carrier to use. It runs on our Double Beaded Steel Track.

SPLICE AND END STOP FOR DOUBLE BEADED STEEL TRACK

Fig. 550 (Mohler)

Fig. 550 is the **splice** for **Double Beaded Steel Track.** It is placed on the under side of the track and is held firmly in place by four bolts, which hold the flanges level at the joints, and make the track just as strong at the joint as at any other point.

Fig. 523 is our **Patent End Stop** for Double Beaded Steel Track.

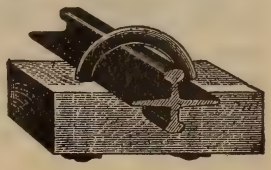


Fig. 523 (Cage)

Louden Senior Cable Carrier

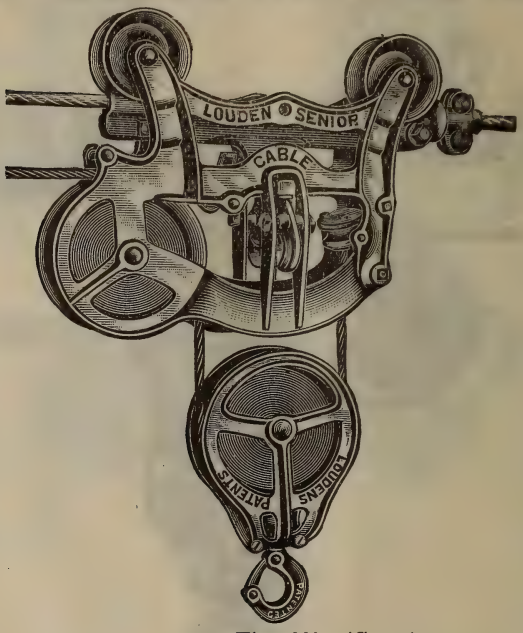


Fig. 660 (Crum)

This Carrier is the same as the Louden Senior Steel Track Carrier on the preceding page, except that it is fitted to **run on a wire cable track** and is not a Swivel Carrier. In it the usual difficulty of using wire hoisting ropes, owing to their kinking, is done away with, as the car is fitted with our **Iron Knot** and **Patent Swivel,** similar to that shown in Fig. 430 S and C, page 4. Weight, complete with stop block and fork pulley, 36 lbs.

Fig. 417 (May)

Fig. 632 shows a section of our **Flexible Wire Draft Cable,** ⅜ inches in diameter. It is a special quality of wire rope, made to work around a 7 or 8 inch pulley.

GALVANIZED STEEL WIRE CABLE

This cable is composed of six strands, seven wires to the strand, laid about a hemp centre. It is ⅝ inches in diameter and is used as track for the Cable Carrier and Ricker.

Fig. 632 (July)

Louden Junior Cable Carrier

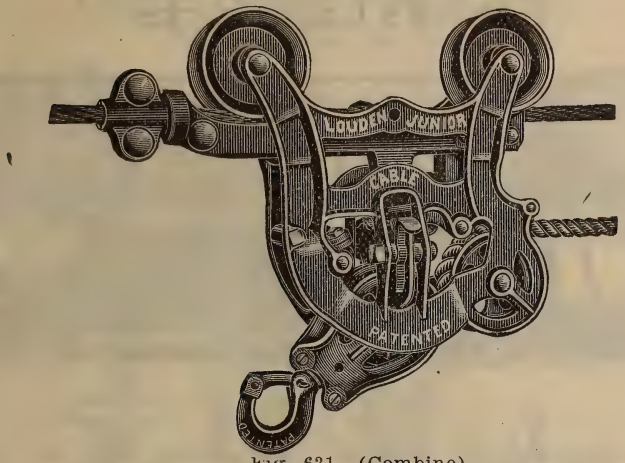


Fig. 621 (Combine)

This is the simplest and easiest working Cable Carrier made. It is a companion to our Louden Junior Carrier, Fig. 430, but it is made to **run on a wire cable** and is not a Swivel Carrier. It has the same lock as our regular Junior Carrier and it never fails to work perfectly. **The lock** has a **square catch** and cannot wedge fast as it does in other Carriers. The end of the Draft Rope being fastened into the Carrier with a **swivel,** the trouble of kinking and twisting is overcome. It has the regular **wide flaring mouth** and **round top Fork Pulley** that is always found with the Louden Carriers. With this Carrier you can always use any kind of Fork or Slings. When Slings are used it is necessary to use our Self Locking Sling Pulleys.

In our patent **Cable Stop Block,** Fig. 801, the Clamp A is securely attached to the cable. The Stop Block B is swiveled at one end to the Clamp A, while the other end is a short sleeve which fits loosely around the cable and holds it in position, and at the same time allows it to hang straight below the cable, so that it will always lock in the Carrier.

Weight complete with Stop Block and Fork Pulley is 26 lbs.

Fig. 801 (March)

Fig. 337 (Porto)

Improved Malleable Wire Cable Loop and Stop Clamps

Fig. 337½ (Rico)

Fig. 337 is our improved **Malleable Wire Cable Loop Clamp.**
Fig. 337½ is our improved **Malleable Wire Cable Stop Clamp.**

Louden's Cable Ricker

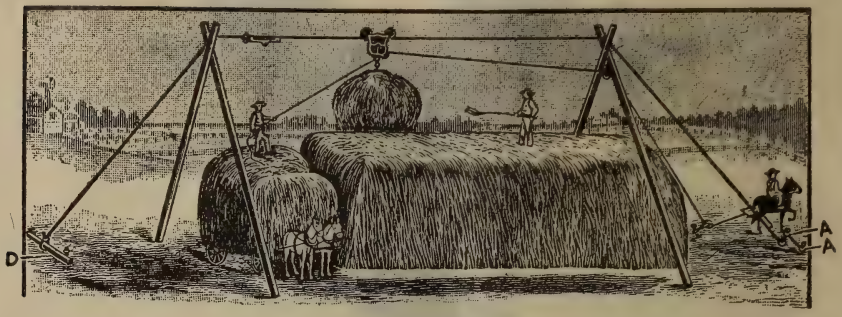


Fig. 597

Fig. 597 illustrates our **Improved Cable Carrier,** Fig. 621, rigged for stacking. It is an excellent arrangement for handling hay easily and quickly, and getting it into the stack at a small cost. This Stacker works on the same principle as a Hay Carrier in a barn. The Carrier travels on an overhead Wire Cable Track, that is supported by **poles** as shown in cut. These **poles** should be from 28 to 35 ft. long, according to the size of the stack to be built, and should not be of less than 4 x 4 good sound timber. Where it is procurable 6 x 6 is better.

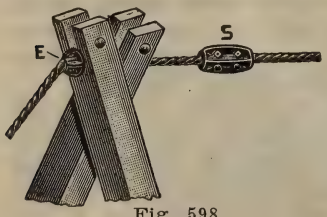


Fig. 598

Fig. 598 shows how the **upper ends of the poles** are fixed to hold the cable. As the hay carried on this track is always dropped along the centre of the stack, it keeps the **middle full,** and helps to make a **waterproof backbone;** so that, when finished, the stack will stand the storms and weather. The poles at the ends, and the cable above, also act as guides in building the stack.

The following articles are needed to complete an outfit:

1 Cable Carrier, Fig. 621.
2 Loop Clamps, Fig. 337, page 13.
4 Stop Clamps, Fig. 337½, page 13.
2 Draft Pulleys.

Besides the cable, which should be of ⅝ inches galvanized steel; although the car will work with ½ or ¾ inch cable.

When the ground is solid, **stakes,** as shown by A A, are sufficient to hold the cable; otherwise a timber D should be planted in the ground. There is always a considerable strain on the cable, and it should be securely anchored. When slings are used a set of Self Locking Sling Pulleys, Fig. 330, page 36, is required.

Louden Junior Sling Carrier

(Rigged with Right Angle Pulleys)

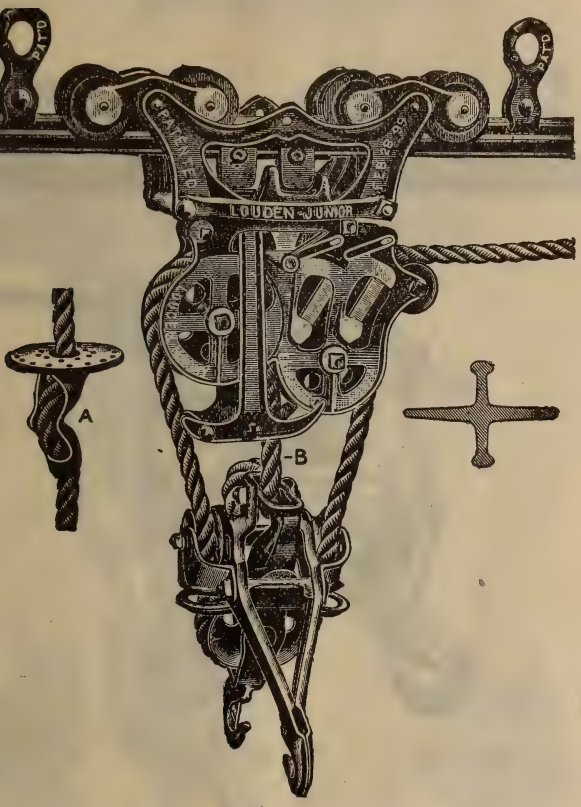


Fig. 491 (Chief)

A reliable, easy working sling Carrier with a never slip lock which has **a 4 inch hold all around the rope.**

The Louden Junior Sling Carrier now needs no introduction to the Canadian farmers. It has won its way to fame and favor by years of testing, and has proved its usefulness in every place where strength and efficiency were demanded. When used with our **Centre Trip Slings,** we guarantee that it is the best Carrier ever put on the market.

Fig. 491 shows it arranged with **Engine Trucks** to run on our Double Beaded Steel Track with right angle pulleys so as to deliver the sling load crosswise in the mow. While by adjusting trip A on rope at B it can be made to carry the load into the mow at any height.

Louden Junior Sling Carrier

(Rigged with Parallel Pulleys)

Fig. 450 (Cross)

Fig. 450 shows the same car working with Parallel Pulleys, so as to deliver the load lengthwise in the mow. With either the Parallel or Right Angle Pulleys, this car can be used with a Double Draft; but experience has proved that when Slings are used it is always best to use the **Triple Draft,** and we decidedly recommend this. **The Lock** is extremely simple and easy to work, and at the same time it is thoroughly reliable and easy on the rope. It consists of upper and lower **parallel clutches,** each about 4 inches long, set opposite to each other, and adapted to **engage the rope on all sides** the entire length of the clutches. The Upper Clutch slides in **slanting grooves** in the Carrier sides, while the lower one is mounted on **hinged legs.**

They are arranged to easily and promptly engage the rope when the Carrier is tripped, and just as easily and promptly release it when the Carrier is latched to the track.

Louden Junior Sling Carrier

(Rigged with Parallel Pulleys)

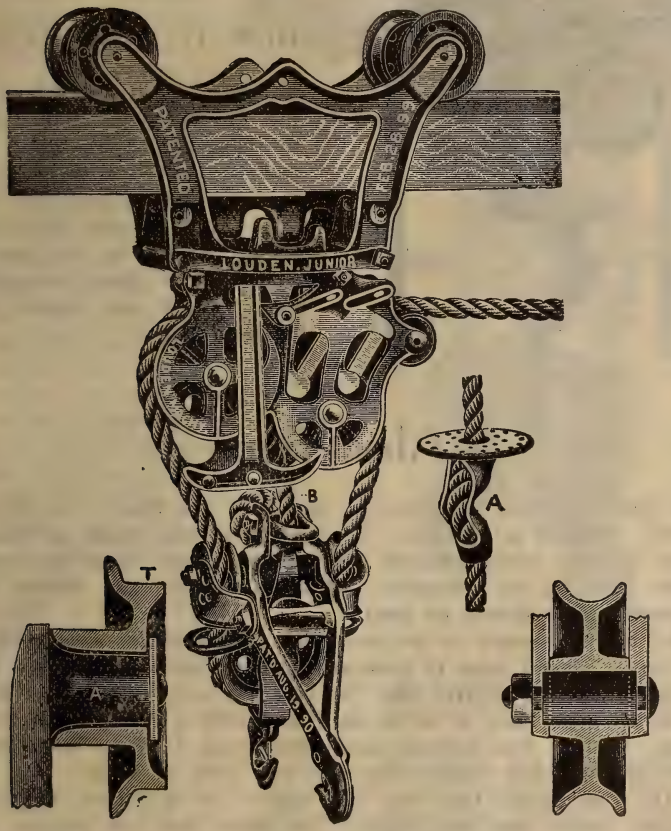


Fig. 492 (Commander)

Fig. 492 shows the same Carrier built for 4 x 4 wood track. You will notice that the wheel arms are **thoroughly braced** in the same way as in all our Junior Carriers, so that they can never spread on the track with a heavy load. With Fig. 492 will also be seen sectional cuts showing our track wheel, and the way that the pulleys are fastened in the car.

The weight of the Carrier complete with Stop Block, Adjustable Trip and Self Locking Pulleys, is about 40 lbs. for steel track and 42 lbs. for wood track Carrier.

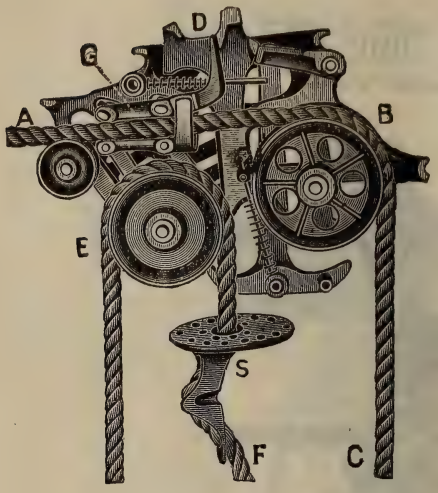


Fig. 491 B

Louden Junior Sling Carrier (Continued)

HOW TO THREAD CARRIER

Fig. 491 B shows how to thread the Carrier. **Set the lock so that the Clutches G are open.** Start the end of the rope in at A, through the Clutches G and over Pulley B. Pass down through Sling Pulleys at C (not shown in cut) and up over pulley at E, down through adjustable Trip S and fasten into Sling Pulleys at F.

About Rope

Many farmers think they should not use less than 1 in. rope on the hay carrier. This is a mistake. Use only the best grade of Manila rope, and in our Louden Junior, Royal, Duplex and Cross Draft Carriers, do not use heavier than ⅞ in. diameter: while in our Louden Junior Sling Car ¾ in. diameter rope should be used.

Do not allow yourself to be persuaded to use either a large or a cheap grade of rope. Cheap rope is generally twisted hard, and kinks badly. In our 40 years experience with hay carriers we have found that in no case should a larger rope than ⅞ in. be used, and with a Triple Draft Car nothing larger than ¾ in. The pulleys used with these Carriers are intended for these sizes of rope, and larger rope will not work as well.

A 1 in. rope should have not less than a 10 in. pulley, and when used on a smaller pulley the bend will be so short that the strands will wear themselves out rubbing on each other; besides which 1 in. rope will cost nearly twice as much as ¾ in. rope.

According to Government tests, the following are the approximate weights and strengths of Best Manila Rope.

	Number of feet to pound	Strength
½ in. rope	13	1700
⅝ in. rope	7½	3000
¾ in. rope	6	3900
⅞ in. rope	4	5700
1 in. rope	3 1-3	6750

Louden's Cross Draft Carrier

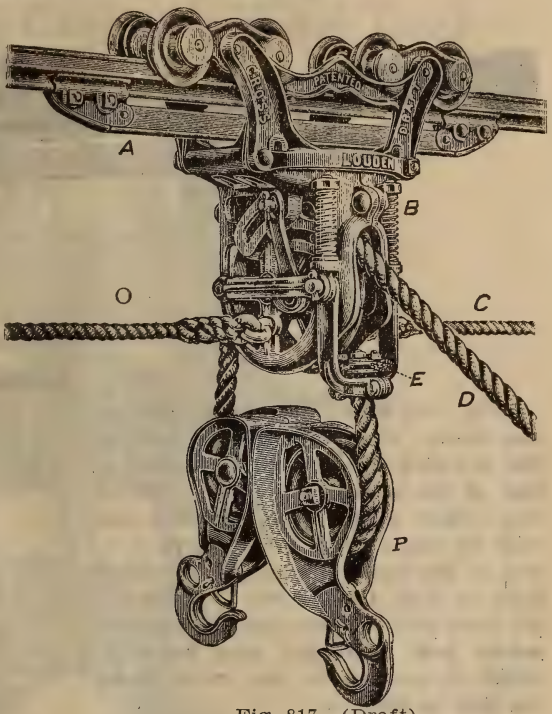


Fig. 817 (Draft)

This Carrier works on a **different principle** to our ordinary Carriers. **The draft rope D runs at right angles** to the track, instead of parallel to it. In this way it passes down to the team in the most direct manner. The draft rope is used only to elevate the load to the carrier, and it does not draw the carrier along the track, the latter being done by the ropes O and C, which run around the pulleys at the end of the barn, and then down to where the team is working. The Carrier is provided with an **automatic lock,** which will hold the hay suspended at any height desired. The team, fastened to the track rope, elevate the load to the necessary height, and when it is high enough to pass into the mow one of the shift ropes O and C is connected to the team, which then returns to its starting place, and thus draws the Carrier into the mow. The shift rope is then disconnected, and the Carrier is drawn back for another load.

Fig. 817 shows the Carrier on the **stop block,** which releases the **lock latch,** and allows the sling pulleys to come down quickly and easily.

Fig. 819 represents the **Cross Draft Rope Hook,** which is used with the Cross Draft Carrier in place of our regular Lightning Rope Hitch. The shift ropes C and O have the hitch F fastened on them. Whichever hoist is required is hitched to the **hook A.** This hook is held in place and tripped by the **latch E,** having an eye B, to which the trip cord is connected. By this means the shift rope is very easily connected to, and tripped from the rope hook, **thus doing away with any loss of time.**

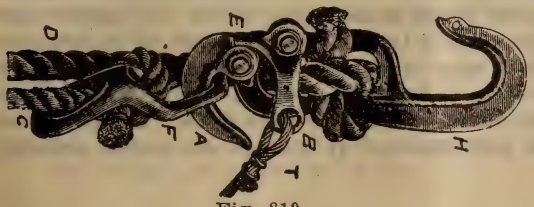


Fig. 819

Louden's Cross Draft Carrier

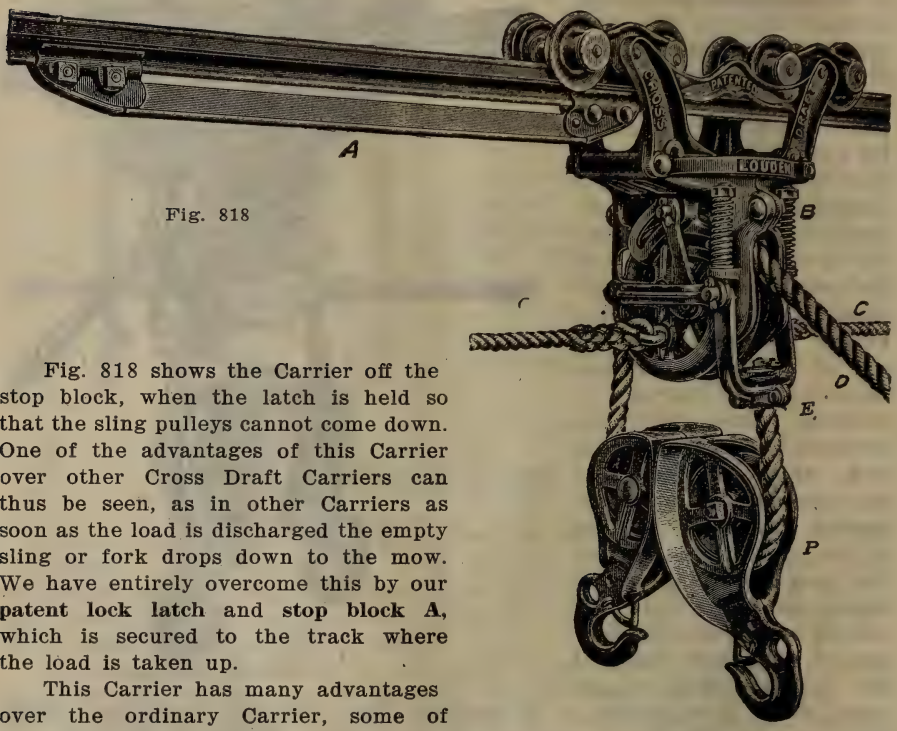


Fig. 818

Fig. 818 shows the Carrier off the stop block, when the latch is held so that the sling pulleys cannot come down. One of the advantages of this Carrier over other Cross Draft Carriers can thus be seen, as in other Carriers as soon as the load is discharged the empty sling or fork drops down to the mow. We have entirely overcome this by our **patent lock latch** and **stop block A,** which is secured to the track where the load is taken up.

This Carrier has many advantages over the ordinary Carrier, some of which are as follows:—

1st. Owing to the draft being more direct it requires about **one-half the usual draft rope,** and as this rope passes over only one large sheave in the Carrier there is **less friction,** thus requiring less power to elevate the load.

2nd. The lock is **automatic** and will hold at any height, so that the load does not have to be elevated any higher than is necessary to pass into the mow.

Like our Louden Junior Sling Car, this car is fitted with our famous **engine trucks,** and **strongly braced wheel arms,** while it has the **patent rope swivel** that is used in our Louden Junior Car, so that there is no opportunity for the rope to kink. The lock is large and perfectly smooth. It works on **anti-friction rollers,** and is therefore exceedingly easy on the rope, and as it has **sensitive pawls and lugs** on both sides of the rope wheel, instead of on one side, it is the most durable and effective, as well as the easiest working lock known.

Reversible Sling Carrier for Wood Track

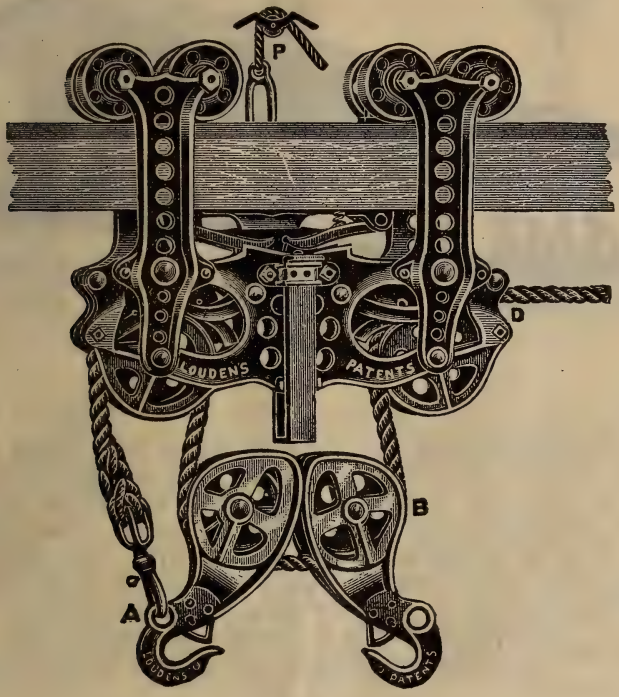


Fig. 315 (Champion)

This Carrier runs on a 4 x 4 wood track (which should be plated) but it can be adjusted to fit a track anywhere from 3½ inches to 4½ inches wide. It is rigged **triple draft** with parallel pulleys and is one of the most successful sling carriers on the market, being very strong and reliable. It is fitted with **eight track wheels,** fastened to the wheel arms, which are strong and heavy and do not spread, so that, however heavily loaded, **the Carrier will not leave the track.** The stop is positive and never fails to work easily. The car is fitted with two sling pulleys, one stop block with lift link, one comb pulley P and two swivel rope hooks A.

The weight complete is 52 lbs.

Switches and Curved Track

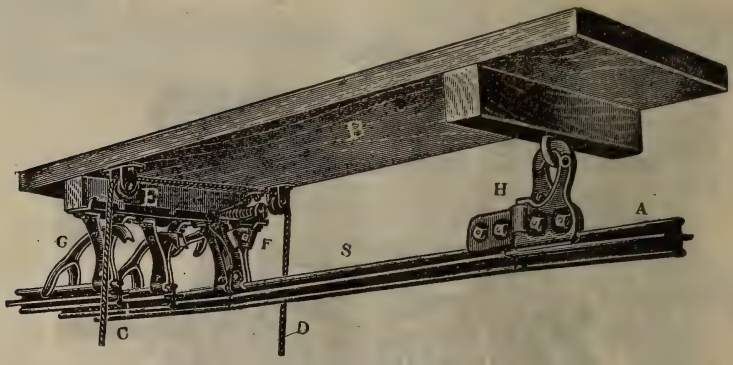


Fig. 795 (Caboose)

Fig. 795 shows a **three way switch** mounted on a plank B, ready to attach to the joist or ceiling of the building. The switch S is hinged to the main track A at H. By pulling on the cords C and D, the hinged section will slide on the plate E and change from one track to the other, so that either one of the three tracks can be used at will. The hinged section S is locked in place by the latch F. This switch can be fitted for **either two or three tracks,** and can be **operated from below,** no matter how high the track is hung. **A guard G** is used to prevent the Carrier from running off the track, should the switch be left open. We furnish these switches securely mounted to board B.

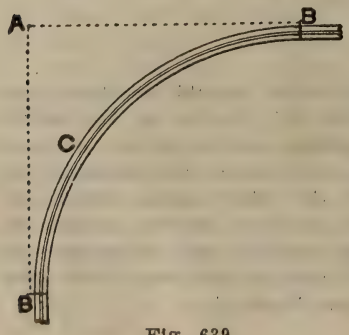


Fig. 639

Fig. 639 is a diagram for measuring track around a curve. Where a **6 ft. Right Angle Curve** is used, it will make up for approximately 4 ft. of straight track on each side from A to B, or about 8 ft. in all. Where an **8 ft. curve** is used it will make up approximately 5 ft. on each side, or 10 ft. in all. Generally the 6 ft. curve is long enough to turn a square corner.

Louden Steel Track Hangers

Fig. 498 (Carson)

Fig. 803 (Trout)

Fig. 803 B (Casey)

Fig. 498 shows our regular **Steel Track Hanger** for Double Beaded Steel Track. This is a **two part hanger,** bolted together just above the track, and is very secure. There is no chance for the track to be pulled out of this hanger however great the load on it.

Fig. 803 is our new **Link Hanger,** which is particularly adapted for uneven ceilings. It is made in the following lengths: 6 in., 8 in., 10 in., 12 in., 14 in., and 16 in.; but it can be made of greater lengths if desired.

Fig. 803 B is our new **Swivel Hanger,** which is somewhat similar to our Link Hanger, but is fitted with a hook or loop instead of a link. This hook or loop can be **swiveled around,** so that where the track runs at **an angle to the joists** there will be no difficulty in attaching the hanger.

LIGHTNING ROPE HITCH

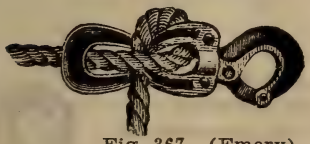


Fig. 367 (Emery)

Fig. 383 (Excelsior)

Fig. 367 is our **Lightning Rope Hitch.** It is instantly attached and detached, or adjusted to lengthen or shorten the rope. This is the **only Hitch** with a **patent Safety Hook** to prevent it unhooking.

Fig. 383 is our **Swivel Rope Hook** fitted with the **patent Safety Point.**

Louden's Rafter Brackets and Pulley Hooks

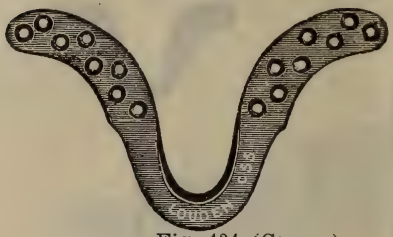


Fig. 424 (Casper)

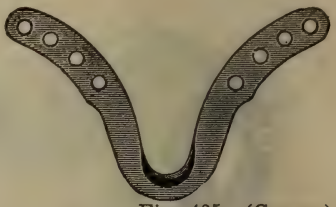


Fig. 425 (Caesar)

Fig. 424 is the **Louden Rafter Bracket.** The strongest and best Rafter Bracket ever made.

Fig. 425 is the **Common Rafter Bracket.**

Fig. 640 (Casket)

Fig. 373 (Cement)

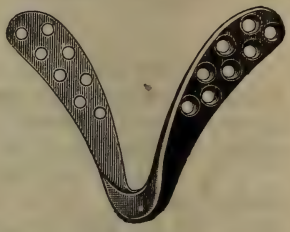


Fig. 465 (Cubeb)

Fig. 640 is the **Canadian Pattern Rafter Bracket** for wood track hang hooks.

Fig. 465 is our **Ridge Pole Rafter Bracket** to be used when the track is hung parallel to a joist or 2 in. scantling.

Fig. 373 is our **Barbed Steel Nail** for putting on Rafter Brackets.

Fig. 675 (Cute)

Fig. 675 is our **Side Rafter Bracket** used for hanging the track to rafters on one side of the roof.

Fig. 389 is our **Floor Hook** which is 7 in. x ¾ in., and Fig. 390 is our **Rafter Hook** which is 5½ in. x ⅝ in.

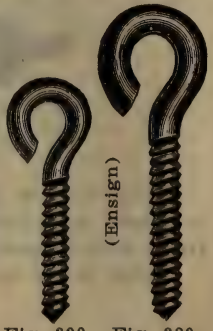
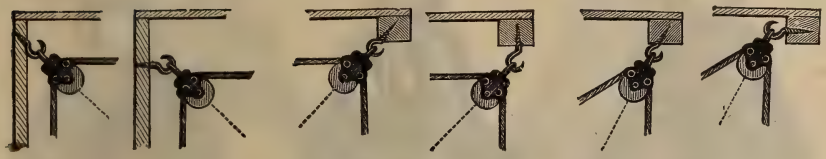


Fig. 390 Fig. 389

How to Set Pulley Hooks



Pulley Hooks should always be set so that they will stand **straight with the line of draft,** as shown by the dotted lines. When the pull is **crosswise it will bend the hook.** Of the above cuts, 1st, 3rd and 5th are right, while the 2nd, 4th and 6th are wrong. A ⅝ in. or ¾ in. hook put in properly will stand more than a ⅞ in. hook put in wrong.

Louden's Pulleys

All the different parts about a Haying Outfit should be first class. They must be strong, durable and well adapted for the purpose for which they are used. If anything breaks during haying or harvesting, it generally means a delay with its attendant loss of money and injury to crops. These breakages are more apt to occur with the pulleys than with any other part of the outfit.

We have therefore **given special attention** to our pulleys, which we have designed, taking into consideration every detail which would increase their usefulness and **lessen the danger of breaking.** We have realized the need of making a pulley, which, while strong enough, would be neat and easy to handle. We have therefore been careful to make those parts heavy where strength is required, and the other parts as light as is consistent with safety. The **frame** is made of two parts held together by rivets and bolts. The **sheave** turns on a **large metallic bushing,** which is set into the sides of the frame of the pulley, and held in position by a bolt. The opening in the frame has a protection which stands over the edge of the sheave and thus **protects the rope from the sheave.** The curve in the pulley is designed to fit the rope and thus be easy on the rope. We realize that a cheaper grade of pulley is made, but we would decidedly recommend the best pulleys, as at a very trifling addition of cost safety is insured and time is saved.

New 6 in. Pulleys

Fig. 467 (Paragon)

Fig. 494 (Passport)

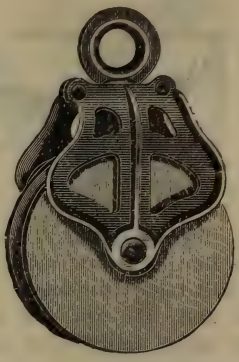


Fig. 468 (Prelude)

Fig. 467 is our **Knot Passing Pulley** with wood sheave. It is made with malleable frame and select **hard maple sheave** 6 in. in diameter.

Fig. 494 shows the same frame with a 6 in. **iron sheave.**

Fig. 468 is our **Draft Pulley,** malleable frame, select **hard maple sheave** 6 in. in diameter.

Fig. 495 the same frame with a 6 in. **iron sheave.**

These pulleys are all made with separate sides so that they can be taken apart for repairs. The eyes are **heavily ribbed** and have **tubular swivels.** The **bearings** in the iron sheaves are **chilled** and run on malleable bushings.

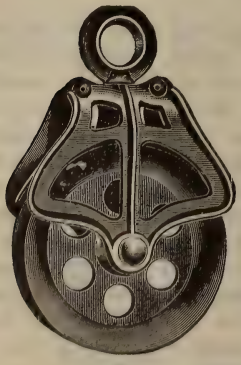


Fig. 495 (Password)

Fig. 553 is a sectional view of the **iron sheave pulley,** showing the **tubular eye,** and the **projection** in the opening of the frame, which protects the rope from the edges of the sheave, the metallic bushings on which the sheave turns, the **recess** in the frame in which the metallic bushing rests, and the bolt that holds it in place.

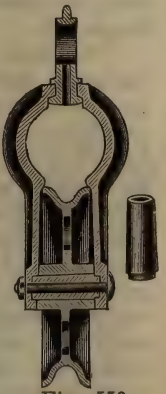


Fig. 553

Louden's Cable Pulleys

Fig. 579 (Perfect)

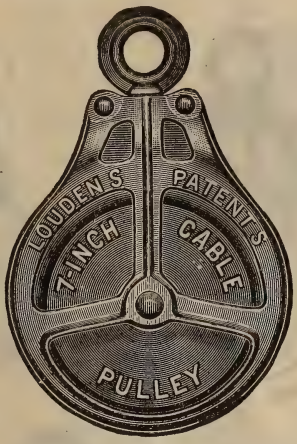


Fig. 651 (Kuroki)

Fig. 579 shows our **8 in. Cable Pulley** which is made with a malleable iron frame, and has all the good features of our 6 in. pulleys: the **tubular swivel eye,** the **frame** made in two parts held together with bolts and rivets, the **large metallic bushing** recessed in the pulley frame, and the **projections** or guard in the opening of the frame to protect the cable. It is extra strong and heavy, weighing nearly 10 lbs. The groove in the sheave is made suitable for wire cable from ⅜ to ⅝ inches in diameter. A common rope can be used in this sheave if desired.

Fig. 651 is our **Cable Pulley with 7 in. sheave,** and is very similar to our 8 in. pulley, only the frame covers the whole of the sides of sheave. Both of these pulleys are made only with iron sheaves.

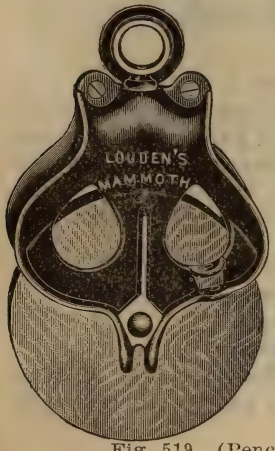


Fig. 519 (Pencil)

Louden's Mammoth Pulleys

Fig. 519 shows our **Mammoth Pulley,** which has a 7 in. wood sheave and an extra strong and heavy frame. It has a large bushing and separate sides bolted together, and is fitted with eyes to which chain can be fastened.

Louden's X.L. Pulleys

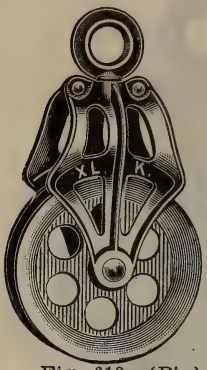


Fig. 612 (Pin)

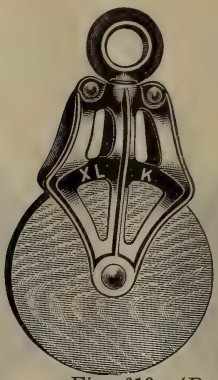


Fig. 613 (Peck)

Fig. 614 (Page)

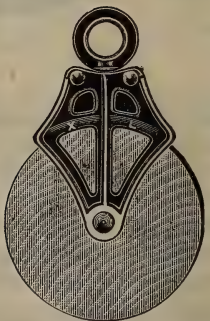


Fig. 615 (Pink)

Fig. 359 (Pointer)

Our **X. L. Pulleys** are similar to our regular new 6 in. Pulleys, only they are fitted with lighter malleable frames. They are a good, strong, substantial pulley, superior to a cast iron or steel frame pulley, and they are made to meet the demands of the trade where a cheaper pulley than our New 6 in. Pulley is wanted. The sheaves are 6 in. in diameter and are held in place with the same metallic bushing as in the other pulleys, and they have the tubular swivel eye.

Fig. 612 is our **X. L. Knot Passing Pulley** with **Iron Sheave.**

Fig. 613 is our **X. L. Knot Passing Pulley** with **Wood Sheave.**

Fig. 614 is our **X. L. Draft Pulley** with **Iron Sheave.**

Fig. 615 is our **X. L. Draft Pulley** with **Wood Sheave.**

Fig. 359 is our **Return Pulley** with **3 in. Wood Sheave** for ½ in. rope and smaller. This pulley is made in the same way, and has the same fixtures as our New 6 in. Pulleys.

Louden's Fork Pulley

Fig. 366 is our **Fork Pulley,** which is used with all our Fork Carriers. It has a 4 in. sheave and a strong malleable iron frame, with a **safety hook** that has a **tubular swivel.** It is fitted with the metallic bushing, etc., that is used in all our other pulleys. We also furnish these pulleys fitted with a **clevis,** so that they can be used with a Louden Junior Sling Carrier when a fork is needed.

Fig. 366
(Togard)

Louden's Pulley Changers

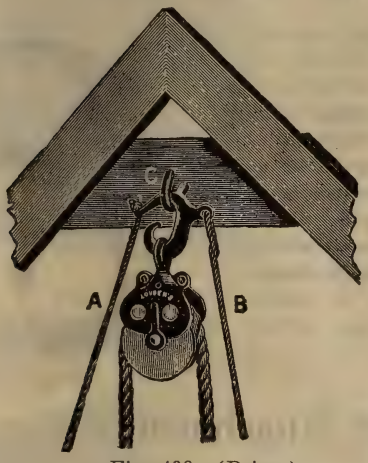


Fig. 438 (Prime)

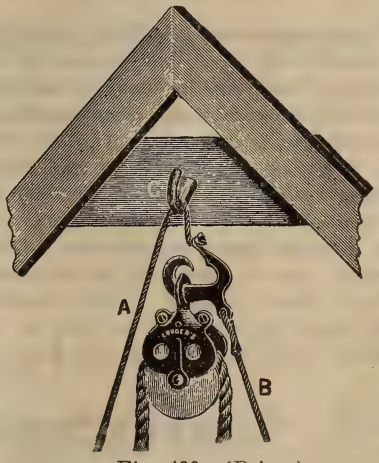


Fig. 439 (Prime)

Our **Pulley Changers** are used to remove pulleys from one hook to the other in the peak of the barn or other place, thus preventing climbing and loss of time. A and B are the ends of a rope fastened to the pulley changer, and when thus fastened they make an **endless cord** long enough to come down within reach. The pulley is hooked into the changer, as shown in **Fig.** 438. When it is desired **to remove pulley, pull on rope B** and the changer will assume the position shown in Fig. 439, and with the pulley may be drawn to the operator, when the pulley may be removed and attached to another changer if desired, and by pulling on rope A the pulley changer can again be placed over the hook C. By having a changer over each hook in the peak of the barn, a pulley can be moved from one place to another in very little time, and **when Swivel Carriers are used they are most useful.**

Snatch Pulley Block

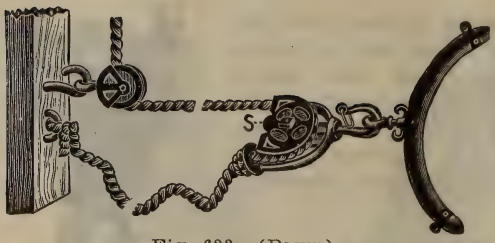


Fig. 623 (Pawn)

Fig. 623 is our **Snatch Pulley Block** which shortens the distance the horse travels. Tie a knot in the rope, and put a washer in front of it as shown in cut. The rope can then be thrown off the Snatch Pulley, and the Fork returned to the load without waiting for the return of the horse.

The Louden Hoisting Single-tree

This **Single-tree**, Fig. 344, does not drag against the horse's legs, and the traces do not unhook, or get under the horse's feet in backing or turning. The traces pass through **keepers K**, and along back of Single-tree to **hooks in centre**. The Single-tree, being bent, is brought close to the horse, like a breeching, without having to shorten the traces, and it is held up by a cord C, having a snap S, which hooks into the trace carrier iron. The eye to which the draft rope is fastened is swiveled, which keeps the rope from kinking. This Single-tree is useful for all kinds of hoisting, as well as for many other purposes—such as plowing ice, etc.

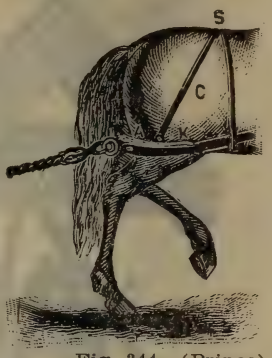


Fig. 344 (Prince)

Louden's Spreader Attachment

Fig. 345 shows our **Spreader Attachment**, by which two Single-trees can be hitched together for use with a team. For ordinary hoisting purposes a rope can be used with the Spreader and the Hoisting Rope attached to it at E, as shown by the enlarged figure in the centre. For other work a chain may be used. For four or six horse teaming there is no arrangement to equal this, as it does not strike the horses' legs and causes no weight whatever on the necks of the team behind. To attach Single-trees, remove the hooks from ends of spreader C, hook onto Single-tree and replace hooks and bolts.

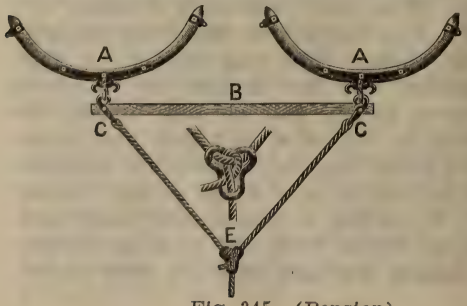


Fig. 345 (Pension)

Louden's Bracket Pulley Holder

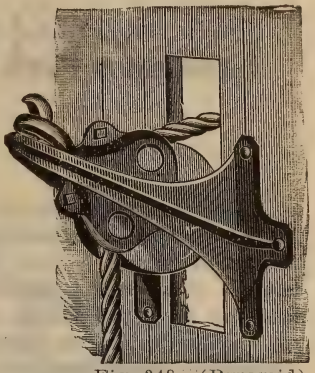


Fig. 348 (Pyramid)

Fig. 348 is our **Bracket Pulley Holder** which is made of malleable iron. This is used to carry the draft rope out through the siding. Any kind of pulley may be used. To attach Holder, cut a hole in siding 4 in. wide and 8 in. or 10 in. high. Bolt Holder on as shown in cut, so that the Hook will be even with the top of the hole. The work can be done from the inside.

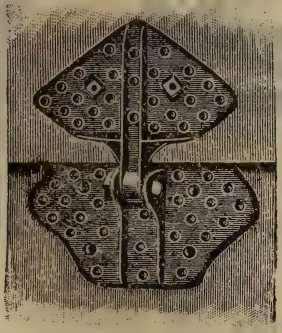


Fig. 349 (Puss)

Louden's Off-set Hinges

Fig. 349 shows our **Off-set Hinges.** These Hinges are **indispensable for gable doors,** as they allow the door to **lap on the siding** and thus keep out the rain. They are made of malleable iron, wide enough to insure a solid bearing on the door, and giving ample room for bolts and screws. They are strong and durable, and handle heavy doors safely.

Louden's Patent Hay Door

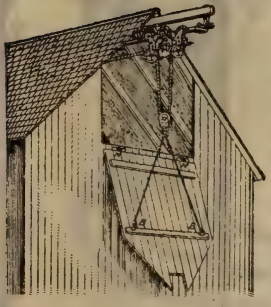


Fig. 347 (Pride)

Our **Hay Door** is hinged to the barn at its lower end with the **Louden Off-set Hinges,** and it has an extended connection from B B with the Fork Pulley P of Carrier (as shown in Fig. 347) so as to give the necessary room to open and close the door with the carrier, in the same way as when taking up a forkful of hay. It is the cheapest and best arrangement for a hay door, as it is inexpensive to make. It is not affected by the wind and can be opened and closed from the ground, either by hand or with a horse. It **shuts up close to the track** and does not require extra tackle to operate it. All that is requird is one pair of Off-set Hinges, two hooks with staples and two hooks B B for the extension ropes. For large doors three hinges should be used. This door works most satisfactorily when the track is run outside the barn with our Patent Extension Support, as shown in Fig. 380, page 10 .

Louden's Fork Clevis for Self-locking Pulleys

Fig. 653 represents our **Fork Clevis** for Parallel or Self-Locking Pulleys, by means of which a fork can be used instead of a sling. Sometimes a load may not have any slings set in it, and then again it may be desirable to take off the top of the load with a fork, and to clean up the rack with a sling. The purpose of this clevis is to meet this need. **Hook A is swiveled** in the same way as the hook in the fork pulley of our Louden Junior Car.

Fig. 653
(Maroon)

Louden's Hay Forks

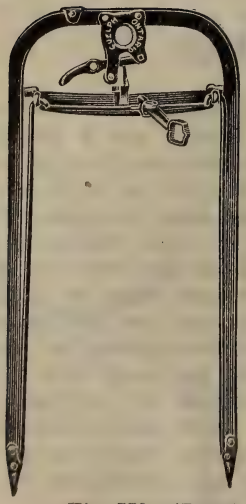


Fig. 773 (Page)

Fig. 773 shows our **Double Harpoon Fork** with the tines open, ready to insert into load, and Fig. 774 shows the same fork with the tines closed. This fork **holds its load close** to the Carrier and drops it in good shape for handling. The tines are small and tapering, and enter green and damp hay easily. It is easy to handle and never out of repair.

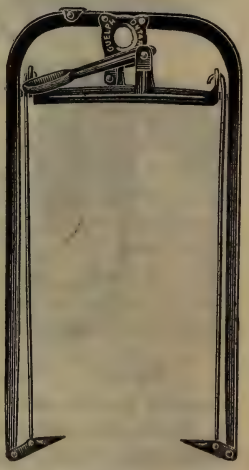


Fig. 774 (Page)

Louden's Six Tine Balance Grapple Fork

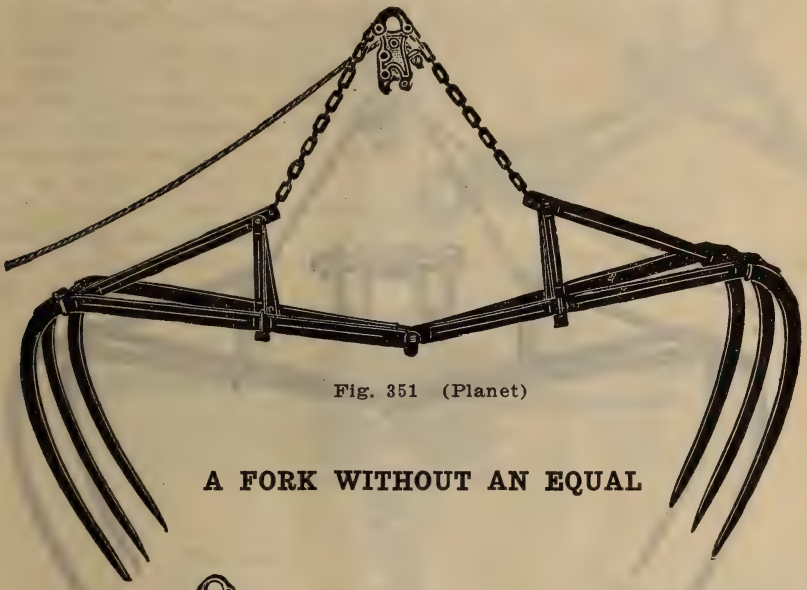
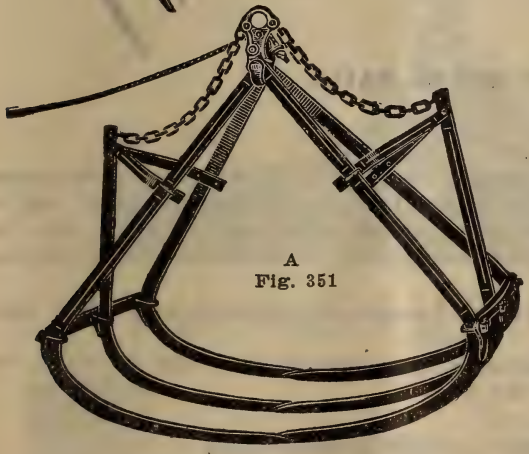


Fig. 351 (Planet)

A FORK WITHOUT AN EQUAL



A
Fig. 351

Fig. 351 represents our **New Six Tine Grapple Fork** in the position in which it descends on the load, and Fig. A 351 shows the same fork closed.

This fork is **perfectly balanced** and can be opened or closed with a slight touch. The secret of this is the **arched support,** which is covered by our patent, and which is the greatest improvement ever made in Grapple Forks.

This fork is adapted to all kinds of hay, and will handle the largest and smallest load with equal precision. It is **especially adapted for short hay and straw,** which it handles better than any other kind of fork. It spreads the hay well in the mow or on the stack. It is very strong and durable.

Louden's Four Tine Balance Grapple Fork

Fig. 648 (Prophet)

IT NEVER FAILS

Fig. 648 shows the same **Grapple Fork,** but fitted with four tines instead of six. These forks are made of the best and stiffest steel that can be secured. The tines are perfectly drawn on both ends, so as to give the strength required where it is most needed, and yet to secure all the lightness possible.

There are no holes in the tines except at the inner ends. The parts are securely clamped together with bolts.

Fig. 648A shows the **malleable connection of the Fork,** to which the head is attached when lifting the load.

SIZES AND WEIGHTS

Six Tined—Spreads when open 4 ft. 10 in. Depth of tines 2 ft. Width of outside tines 19 in. Weight 45 lbs.

Four Tined—The same dimensions. Weight 40 lbs.

Louden's Sling-binding Pulley

Fig. 332 shows our **Sling Binding Pulley** ready to hook into Sling. The Fork Pulley A runs up through the Binding Pulley B when the Sling load is rolled up, and registers in the Carrier in the same way that it does with a fork, as shown in Fig. 423.

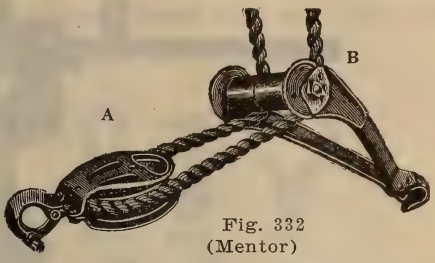


Fig. 332
(Mentor)

This Pulley is especially adapted for **cleaning up the rack,** as all that is necessary is simply to unhook the fork, slip on the binding pulley, and hook to ends of Sling.

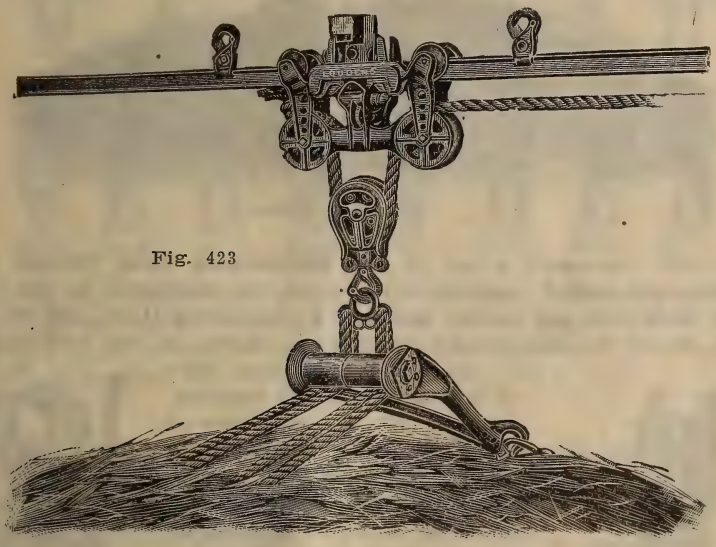


Fig. 423

Right Angle and Parallel Pulleys

Fig. 412 shows how the hay or grain is deposited in the mow, with respect to the track A, when **Right Angle Pulleys** or **Parallel Pulleys** are used. The Right Angle Pulleys spread the hay wider in the mow than the Parallel Pulleys, unless the latter are twisted one-quarter round before tripping the Sling.

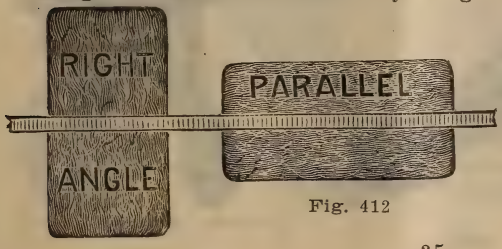


Fig. 412

Louden's Self-locking Sling Pulleys

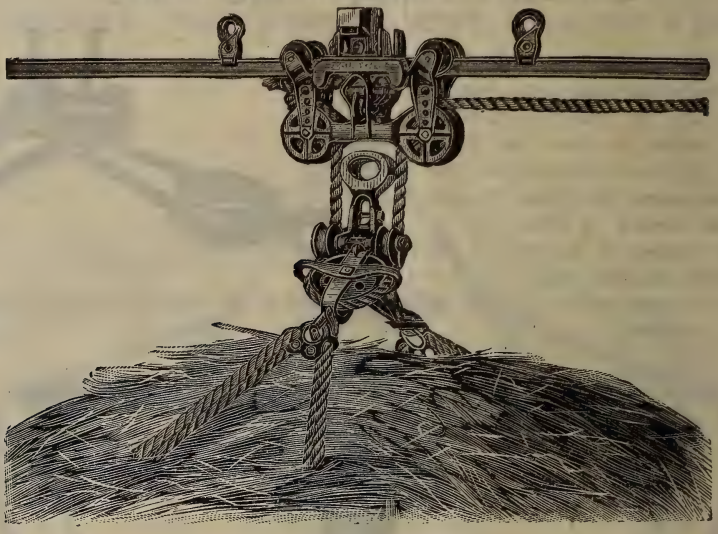


Fig. 422 (Mason)

Fig. 422 represents a set of our **Self-Locking Sling Pulleys** in use. The pulleys are locked together but are not yet registered in the Carrier. **They will work with any Carrier** that uses a Registering Head, and we furnish Heads to fit all the best known Carriers, as shown on the following page.

Fig. 330 is a front view of the pulleys locked together, and Fig. 331 is a side view of the pulleys spread apart to connect the Sling.

When the Sling load is rolled up they lock together as in Fig. 330 and 422 before registering in the Carrier.

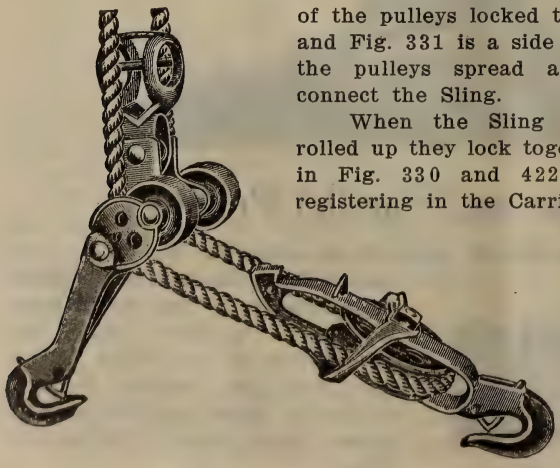


Fig. 331 (Mason)

Fig. 330

Registering Heads for Louden's Self-locking Pulleys

The following are cuts of the **Registering Heads** that we make for our **Self-Locking Sling Pulleys**, to fit the different Carriers named.

Registering Heads will be made to fit other Carriers when there is sufficient call for them. When in doubt as to the Head required, send the Fork Pulley of your Carrier by express **prepaid** and we will fit the Pulleys with the proper Head and return the Fork Pulley with order.

Fig. 649 (Mastiff)

Louden's Parallel Sling Pulleys

Fig. 649 represents our **Parallel Sling Pulleys.** The edges of these pulleys are provided with **wide flanges** and their upper ends are closed so that they cannot run into each other. There are **no sharp corners** to wear the rope. The Hooks are fitted with **self-acting safety stops** to prevent the Slings from becoming detached, and they have the large eyes for the attachment of a rope when needed. They are strong and durable and are warranted the best in use.

Louden's Centre Trip Slings

Fig. 319

Fig. 319 represents half a wagon load of hay, rolled up with one of our Slings, ready to be elevated to the car. **Two or three Drafts will clean the Rack,** leaving no litterings whatever, and placing the hay in the mow or on the stack just as it lay on the load. This is the best device made to handle loose or bound grain, hay, straw, fodder, etc.

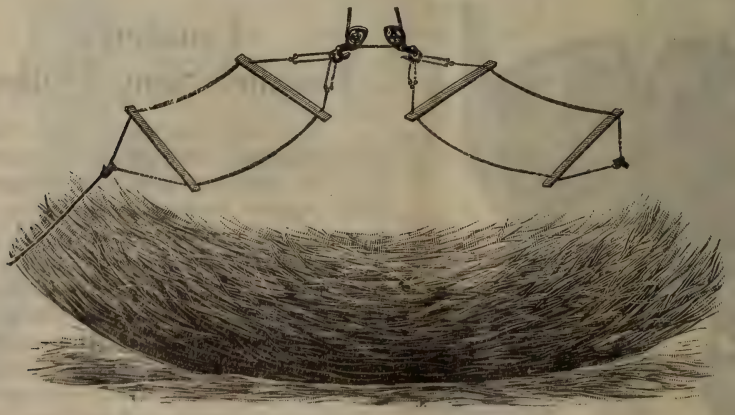


Fig. 320

Louden's Centre Trip Slings (Continued)

We were the originators of successful Slings and Sling Carriers. As with our other Hay Tools, we have made Slings and Sling Carriers a special study, and during the past twenty years we have thoroughly tested them and have greatly improved them. We can safely warrant them to be superior to any others on the market.

Fig. 320 shows the **Sling discharging its load.** A Sling is first laid on the hay rack, and enough hay built on it to make a sling load. Another Sling is then laid on that, and another Sling load of hay is built upon it—and so on until the load is completed.

To unload, the Pulleys P P on the draft rope, Fig. 319, are spread apart and hooked to the Sling at each end of the load. The horse pulling on the draft rope draws the Pulleys P together, and rolls up the hay, as shown in Fig. 319, and then elevates it to the height desired.

The bundle is **tripped in the centre** below the hay and separates into two parts, letting the hay drop out between the pulleys, perfectly clear, and without tilting it on edge, as side trip slings invariably do. The hay being first rolled up, as shown in cut 319, unrolls when discharged, and spreads out in the mow or on the stack as wide as the length of the Sling, and in exactly the same shape as it lay in the rack.

Hay or grain cannot be delivered in better shape for rehandling. Little, or no space is required to clear the Sling, and the ropes never get caught in the hay, as they do with side trip slings. Very little labor is required in building a stack because the hay is dropped in a nice broad flake, which needs but a little smoothing to make the stack settle straight and turn water perfectly.

Fig. 334

Fig. 334 shows how cleanly a load can be taken up. In this case **Parallel Pulleys** have been used, and the entire load taken off with Slings. It can easily be arranged, however, to take off the top of the load with a fork, and then by using one of our Sling Binding Pulleys, Fig. 332, as shown on page 35, to clean the rack. All that would be needed besides the regular hay fork outfit being one Centre Trip Sling and one Sling Binding Pulley.

In using Slings for either hay or grain it is of course necessary to exercise some judgment to obtain the best results. The strength of car and track, the length of the rack, the size of wagon loads and the space above the beams in the barn should all be considered, and the number of slings and their length adjusted accordingly.

Louden's Centre Trip Slings

Slings require more room over the beam than forks do. It is, therefore, unwise to purchase a sling car which hangs down too far below the track. We have watched this point very carefully, and have made all our Carriers and Sling Attachments very compact, so as to occupy the least possible space.

We would recommend laying the sling full length of the load, provided the rack is not too long, and there is sufficient room over the beams for the sling load to pass. Slings spread the full length of a sixteen foot rack require about 10 feet of space between the track and the beam for the load to pass through.

Louden's Standard Centre Trip Sling

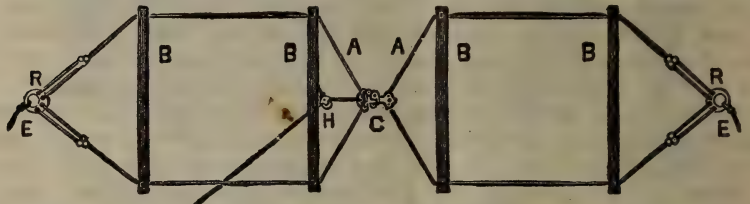


Fig. 321 ... 3½ ft. (Monarch) 4 ft. (Moon) 5 ft. (Mars)

Fig. 321 represents our **Standard Centre Trip Sling** with four slats. It is **made adjustable** to suit any length of rack, and has our **patent Extension Ropes E** to draw Rings R from under the hay.

We make the slats B 3½, 4 and 5 ft. long, but we always furnish the 4 ft. length unless otherwise specified. The rope is ½ in. and is clamped to the slats by ⅜ hook bolts, which permit the adjustment of the slats on the rope, and the addition of extra slats when desired. The weight of Sling is from 15 to 18 lbs.

Louden's Three Rope Centre Trip Slings

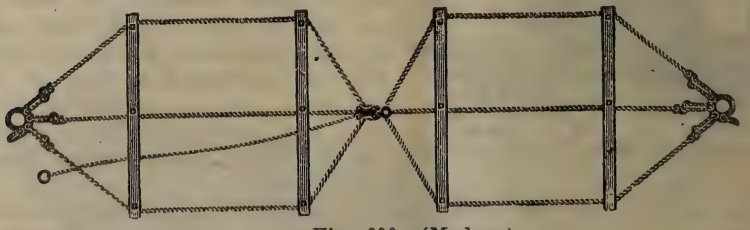


Fig. 600 (Modern)

Fig. 600 is the same Sling as Fig. 321, only it is made with three ropes and has 5 or 6 ft. cross bars. It is especially adapted for ordinary straw or short hay. The weight of this Sling is 20 lbs.

California Wagon Sling

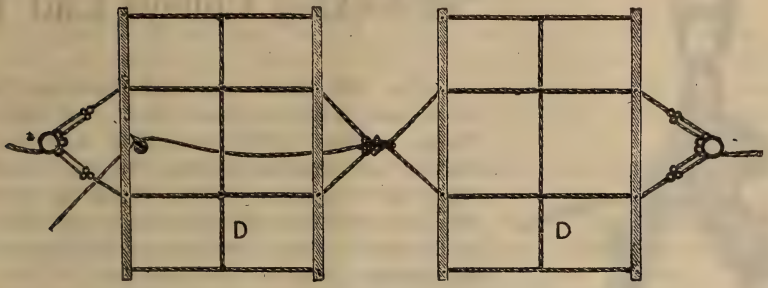


Fig. 324 (Moxie)

The California Wagon Sling is designed for handling very short hay or grain, and won its name on account of the great demand there is for it in the State of California. It is the same as our **Standard Sling,** with the addition of four extra side ropes, and two cross ropes D D. It is adjustable and can be made to suit any size of rack. By **adjusting the ropes** the distance between the centre bars may be reduced to 15 in. The length of slat is 6 ft. The weight of Sling, 28 lbs.

Louden's Sling Coupling

This cut shows the Sling Coupling we make for our Standard and other Centre Trip Slings. It is a **very reliable, easy working** coupling, and can be rigged with three instead of two Sling Ropes on each end if desired. The **working parts** are **completely protected,** and the trip cords T can be easily and quickly attached anywhere without special connections.

Fig. 517 (Matchless)

Louden's End Trip Slings and Attachments

Fig. 603 Short (Maple) Long (Magic)

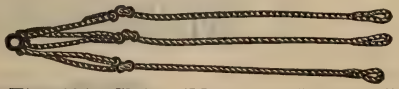


Fig. 604 Short (Magnet) Long (Mite)

Fig. 603 shows our **Two Rope End Trip Sling,** and Fig. 604 our **Three Rope End Trip Sling.**

These Slings are **adjustable,** and (like all our other Slings) can be made **to fit any length of rack.** When they are needed to reach the entire length of the rack we make them long, and call them our Long Two Rope or Three Rope Slings. When only one-half the length of the rack is to be reached we make them shorter and call them our Short Two Rope or Three Rope Slings, as the case may be.

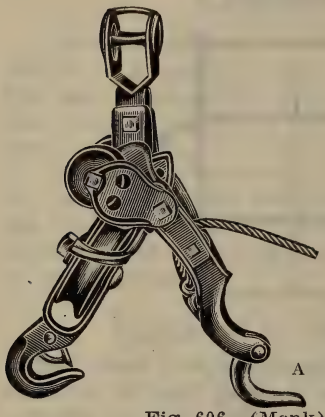


Fig. 606 (Monk)

Self-locking Pulleys End Trip

Fig. 606 shows our **Self Locking Pulleys** to be used with two and three rope **End Trip Slings.** These pulleys are the same as our regular **Self Locking Pulley,** Fig. 331, page 36, with the exception of the **Hook A,** which is arranged to trip so that the end of the Sling may be released. These Pulleys can be fitted with a Registering Head to suit any car.

Chain Attachment

Fig. 605 shows our **Chain Attachment** for use with **Two Rope and Three Rope End Trip Slings.** This Chain Attachment has an **open hook T,** on which is placed the end of the Sling with the rope loop. The Hook is then locked. The **Hook H** is fastened in the ring at the other end of the Sling. This Hook H is fastened to **Chain Clutch L,** so that, by drawing on the **handle A,** the ends of the Sling can be drawn together. The Fork Pulley is hooked into the ring above the **Hook T.** This Attachment can be used with any style of car that will handle a fork.

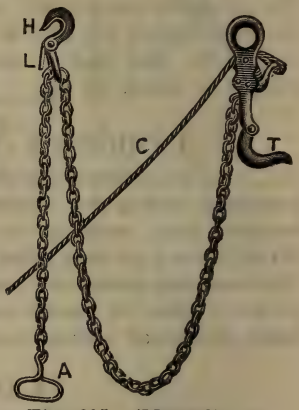


Fig. 605 (Marvel)

Malleable Sprocket Wrench

Fig. 654

Fig. 654 is our **Malleable Sprocket Wrench** arranged for a bit brace. We make four sizes: 1-4 in., 5-16 in., 3-8 in. and 7-16 in. These are cheap and very efficient.

Stable Outfits

It is now a settled fact that the only practical way of handling feed, litter, etc., in barns and stables is the over-head system. This over-head system has also gained great favor for handling merchandise and material of various kinds in stores, factories and mills, and for unloading coal and other material from cars and vessels.

Of the various over-head tracks sold in Canada there can be no question as to the superiority of Louden's Double Beaded Steel Track. It is the strongest, the neatest in appearance and the most easily adapted to the various needs of either barn or factory. We have made a special study of the work for the latter purpose, and have equipped a large number of factories, etc., with our outfits. We should be pleased to give estimates on special carriers for such purposes.

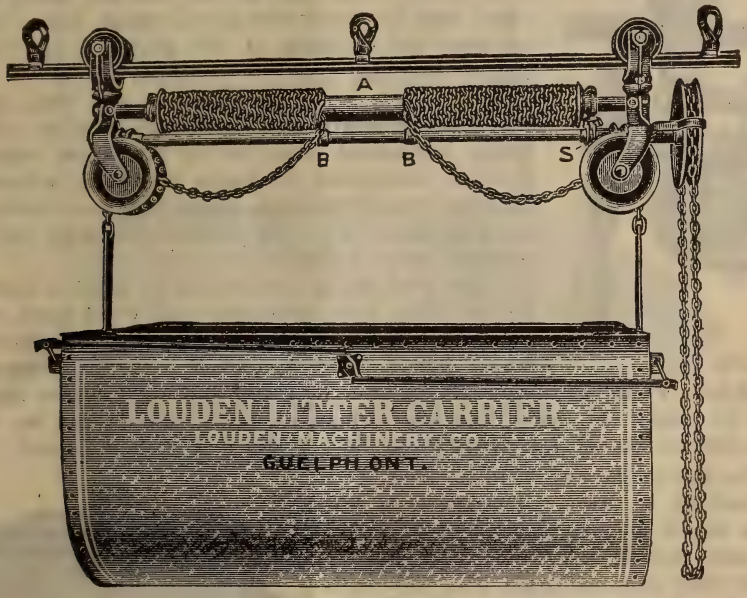


Fig. 800 (High)

Fig. 800 shows our **New High Lift Chain Elevator** attached to our regular **Feed and Litter Carrier Box.** This Carrier is our latest improvement in the way of Litter Carriers. It is very similar to the Litter Carrier which has already made our name well and favorably known from Coast to Coast: but, instead of cables with which to **raise and lower the box,** this Carrier **is fitted with chains,** which run in sprockets placed in the hoisting drums. The end of the chains are then taken up on a pipe, or **hollow Cylinder A,**

Stable Outfits (Continued)

which is mounted upon the pipe which connects the trucks together, and is turned thereon by a Screw S. The chains are attached to the opposite ends of the Cylinder A, and as the box is raised they are wound thereon, so as to take up the slack.

The guides B are used to insure the even winding of the chains on the cylinder. As the box is lowered the chains unwind on the cylinder, the guides B B following back and forth as the chains are wound and unwound. If necessary this Carrier can be supplied without the cylinder A. The chains in that case falling down straight.

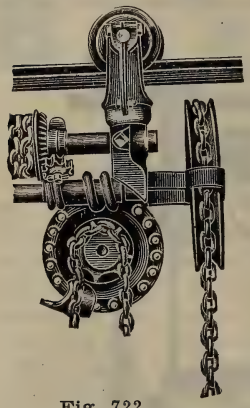


Fig. 722

Fig. 722 is a detailed view of the **Worm Hoisting Gear.** The front part of the bracket being broken away, and the front side of pin wheel being removed to show the working of the gear. It is the most perfect hoisting gear in existence.

Fig. 723 is an **end view of the box,** showing its great strength and symmetry. It is made of **heavy galvanized iron,** having the upper edges and corners re-enforced by **Angle Iron**—the whole being securely **riveted together,** making it water tight. This cut also shows the latch or trip that holds the box in position when loaded.

We also make these boxes of painted steel, and we fit them when required with wood ends, instead of the steel ends. In any case they are thoroughly water tight. They are fitted with two latches, one at each end, which are connected together by a rod and are released simultaneously to empty the box. The box swings so easily that it can be righted with a fork or shovel, and there is no need to touch it with the hand.

The size of the box is 48 in. long, 24 in. wide and 22 in. deep. **The truck is fitted with a swivel** at each end and will turn in any space that a cow can. It is made of tubular steel and malleable iron well bolted together, so that it is not only strong and durable, but neat in appearance. **The wheels** have special flanges which prevent kinking on the track, even when running on the shortest curve.

The axles for the wheels are made of the best ⅞ in. tempered steel, bolted into sockets full size, insuring full strength and no weak shoulders. They run easily on the track, even when heavily loaded.

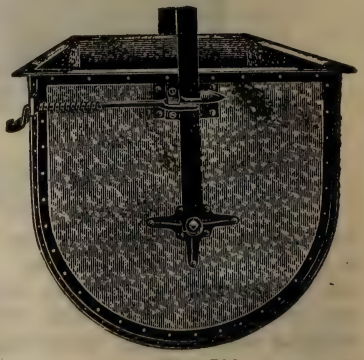


Fig. 723

Louden's Feed and Ensilage Carriers

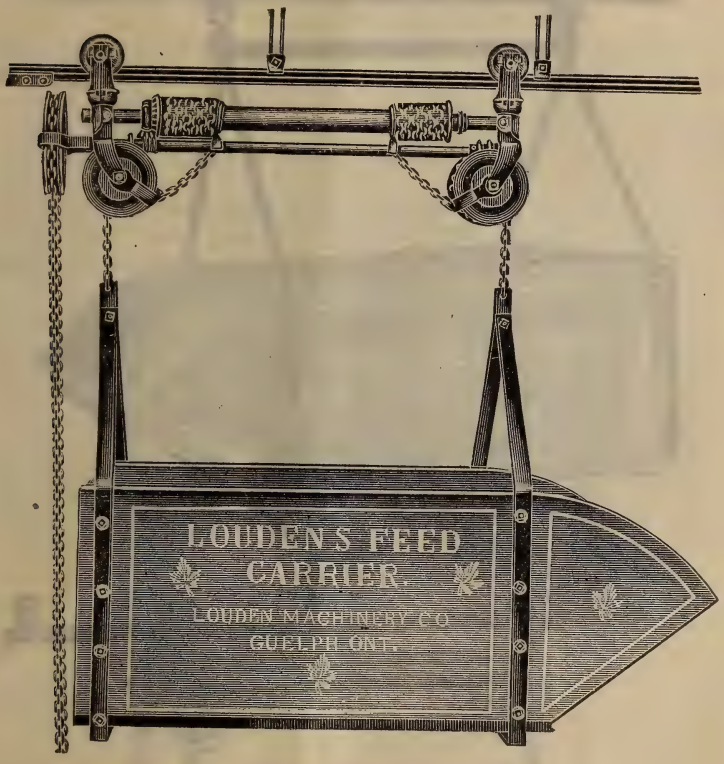


Fig. 763 (Halve)

Fig. 763 is one of our **Feed and Ensilage Carriers.** These are made to raise and lower, and to run on our **Double Beaded Steel Track** the same as our Feed and Litter Carriers. We make the boxes 28 in. wide, 20 in. deep, and 4 ft. 10 in. long. They are made with regular box straps and are tongued and grooved like a wagon box. They are designed to run in the feed alley, so that the operator can scoop the feed into the stalls on either side. The sloping end makes this easy and speedy work. They will easily hold twelve bushels of grain or feed. The **corners are bound with iron,** and the upper edges have regular wagon box straps. They are well finished and are warranted superior to anything on the market.

Louden's Feed and Ensilage Carriers

Fig. 764 (Hames)

Fig. 804 (Team)

Louden's Feed and Litter Carriers

Fig. 764 is the same as our **Feed Carrier,** Fig. 763, except that it does not raise or lower. The connections are substantial and it runs easily and will give good satisfaction.

Fig. 804 is similar to our **Feed and Ensilage Carrier,** Fig. 763, only it is fitted with two sloping ends, so that the feed may be scooped out from either end of the box.

While we show these three kinds of Feed Boxes, we realize that different shaped boxes may sometimes be required. We should be pleased to give suggestions and quotations on these at any time.

How to Install Litter Carriers

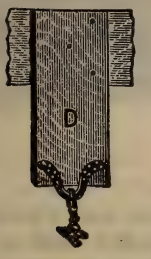


Fig. 577

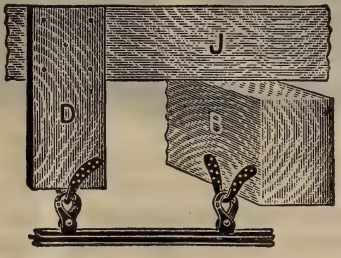


Fig. 576

In hanging track to joists it is sometimes necessary to run under beams B (as above in Fig. 576). To do so, either spike a 2 in. piece D to the joist J, so as to come down even with the lower edge of the beam B, or use our Link Hanger which is made of various lengths. When the track runs lengthwise with the joist, nail a Ridge Pole Rafter Bracket, Fig. 465, page 24, to the lower end of the drop piece D, and attach the track hanger to this, as shown in Fig. 576. When the link hanger is used instead of the drop piece B the Ridge Pole Rafter Bracket can be put on the Joist, or else a Rafter Hook can be screwed into the joist to which the Link Hanger is hung. When the track runs crosswise of the joist a regular Louden Rafter Bracket, Fig. 577, can be used. In making curves, etc., we would recommend the use of our Swivel Hanger, Fig. 803 B, page 23.

Louden's Feed and Litter Carriers (Continued)

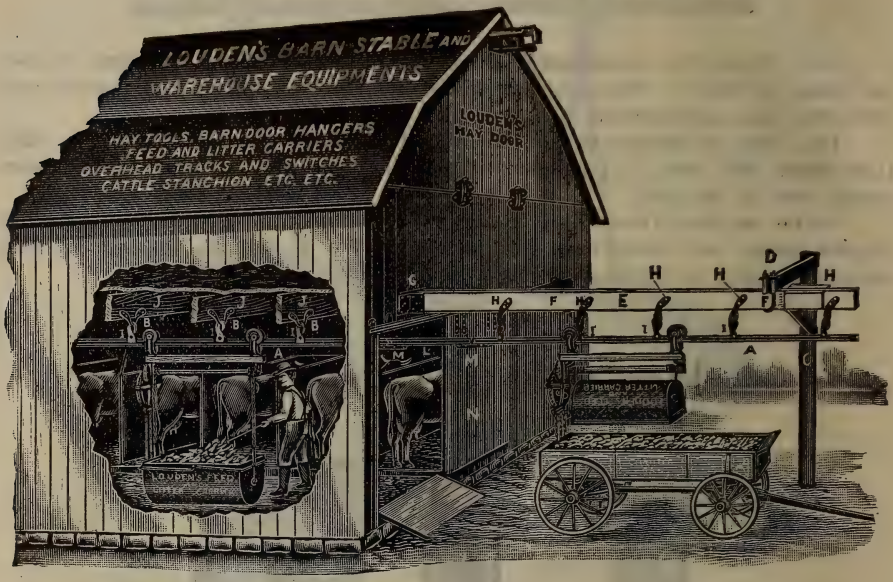


Fig. 599

Fig. 599 shows the arrangement of our Feed and Litter Carrier when used in an ordinary barn. The track is suspended back of the stalls in the stable to the joists J by the track hangers I and brackets B, and is run out of the door into the yard by means of a ridge pole E, which is supported by the post C and cross arms D. On this ridge pole our Ridge Pole Brackets H are used with the track hangers I. These brackets are made for timbers 2 in. thick and we would recommend that the ridge pole E should be 2 x 8, and the cross arms D 2 x 4. The ridge pole E can be fastened to the arms D by common bolts, but we would recommend the use of our Wagon Rack Clamp F, Fig. 555, page 65. By using these clamps the timbers will not be weakened, as no holes will have to be bored through them. By suspending the track in this way it can be carried out into the yard as far as necessary, and can be curved to run to any part of yard.

If desired, two sets of posts with cross bars, from the top of one to the top of the other, can be used. The section of track next to the barn can easily be made removable, as shown in Fig. 633, page 5, so that a load of hay can be driven through at the end of the barn. We would recommend for this purpose the arrangement shown in Fig. 791, page 50.

Louden's Feed and Litter Carriers

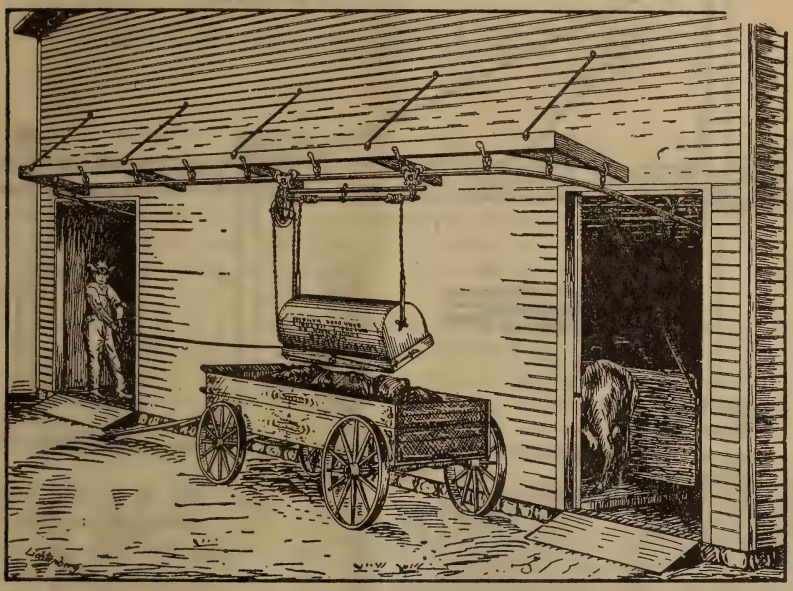


Fig. 703

Fig. 703 shows the **track bracketed to the end of the barn,** instead of fastened to posts out in the yard. By this arrangement the track may be run from one door in to another, and no switch will be needed, and the Carrier may be carried out of the barn far enough from the side to drop the manure on the wagon, as shown in Fig. 703. The track should be hung at least 3½ or 4 ft. from the barn. This may be done as shown in Fig. 704 or 705. Fig. 704 is a sectional view of a bracket, which is supported by ½ in. rods, coach screwed to the barn. The stringer to which the track is hung is 2 x 6 and the braces 2 x 4. Fig. 705 is the same, supported by a 2 x 4 timber, spiked to the barn, in place of the rod in Fig. 704.

For the arrangement of switches and description how to curve track, and other particulars about steel track, hangers, brackets, etc., see pages 9, 11 and 22 to 24.

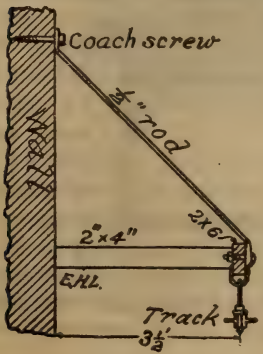


Fig. 704

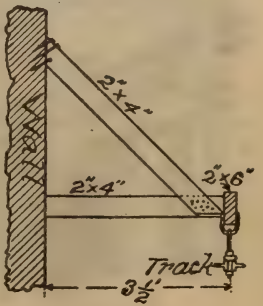


Fig. 705

Louden's Feed and Litter Carriers
(Continued)

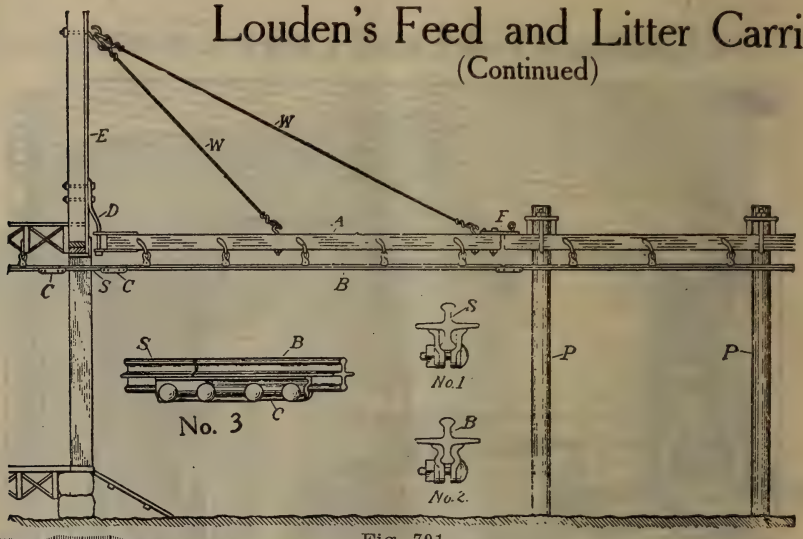


Fig. 791

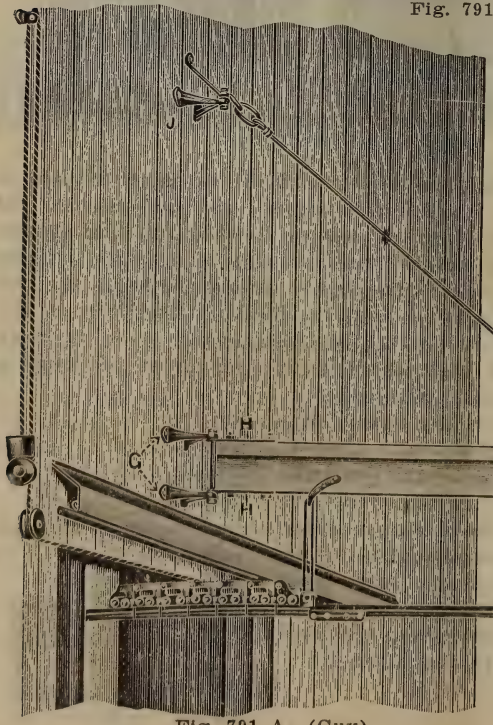


Fig. 791 A (Guy)

Fig. 791 is a side elevation showing a **swinging section of the track** connected with the track in the barn, and also with track out in the yard, thus providing a means for opening a **passageway for teams** along the end or side of the barn. A is the ridge pole or timber to which the swinging section of track is supported in the usual way. This ridge pole is hinged at its inner end by the iron D bolted to the wall E, and is supported by one or two rods W secured to the wall as shown. A better arrangement than that shown in Fig. 791 is shown in Fig. 791 A, where our **swinging crane hinge** and our **guy rod brackets and connections** are shown.

Louden's Feed and Litter Carriers

We supply these **swinging crane hinges,** consisting of **two brackets G** which are fastened by coach screws to the door sill, and of **two irons H H** which are bolted to the swinging crane. We also supply the **guy rod brackets and connections,** consisting of the **bracket J** which is fitted for one or more guy rods as required, and the **loops K,** by means of which the guy rod can be shortened or lengthened as required. We also supply guy rods of required lengths.

In Fig. 791 S is a small removable section of track which is used to connect the swinging section B to the track in the barn. It is held in place by two special clamps C, more plainly shown by the enlarged drawing, view No. 3. The ends of the clamps holding the removable section S are shown in the cross section No. 1. The ends of these clamps, secured to the track B and the track in the barn, are shown by cross section No. 2. It will thus be seen that the short, removable section can be easily lifted out, when the section B is swung around to either right or left, or replaced when the track is swung back in working position. A similar clamp is used at the outer end of section B, while plates F are bolted to the sides of ridge pole secured to the posts, so that the end of ridge pole A can be placed between them and be held in place by a pin.

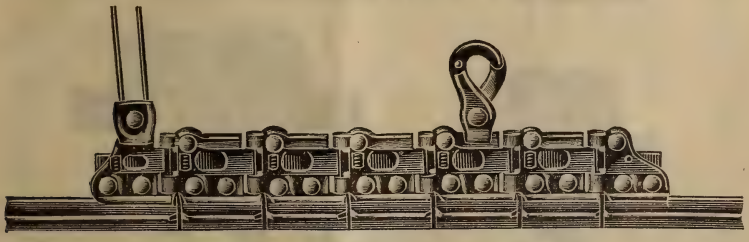


Fig. 793 (Swing)

A better arrangement than these removable splices will be found in our **new swinging track hinge, Fig. 793.** This hinge is made of a number of short pieces of track securely bracketed together by hinged joints, the whole being strengthened by a piece of spring steel so that the hinge makes a perfect curve, however bent, and thus insures the track wheels running smoothly onto the crane at whatever angle it may be in the yard.

Louden's Feed and Litter Carriers
(Continued)

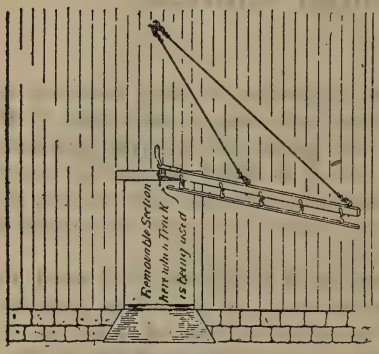


Fig. 792

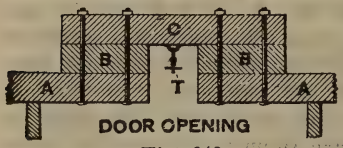


Fig. 643

Fig. 792 is a three-quarter elevation showing swinging section of track connected with the barn only. This section is used when manure is to be dumped a short distance from the barn, or when it is found desirable to run it outside to empty into manure spreader or wagon. This swinging section can be made 40 ft. or longer when supported with our **swinging crane hinge and guy rod brackets and connections,** but shorter sections are recommended. When the door opening is too low for the track to run out level from the joist it may be arranged as shown in Fig. 643. Cut the timber A immediately above the door, place above it one or two, or more short timbers B B on each side, then a cap timber C above these, and bolt together with four bolts. The track T can then be run out of the opening above the door.

Louden's Merchandise Carriers

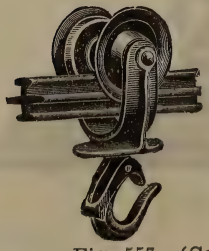


Fig. 557 (Corn)

Fig. 769 (Fodder)

Figs. 557 and 769 show our **Merchandise Carriers,** which are suitable for warehouses, store rooms, feed barns, slaughter houses, etc. Fig. 557 is the **two wheeled truck,** fitted with a hook, on which a hoist or any other arrangement may be fastened.

Fig. 769 is the **four-wheeled trolley,** also fitted with a hook.

Louden's Sanitary Stalls and Stanchions

Cleanliness in a stable plays a very important part in regard to the health of dairy cattle. In fact, with the exception of pure food and water, nothing is more important.

In designing **our stalls** and **stanchions,** which are shown in the following illustrations, we have carefully thought out the matter, and have provided a stall that will permit of **perfect ventilation,** and a stanchion that will give the **greatest freedom of movement** consistent with the restraint necessary to keep the cattle lined up in their places. Our stalls make an extremely solid and durable installation. Practically **no light is shut out,** and as they are all made of **tubular iron,** there are no flat surfaces on which the dust can accumulate. This also makes the task of keeping them entirely free from dirt of all kinds a very easy one. The partitions, supports, etc., are made from 2 in. steel pipe, held together by malleable fittings which clamp the pipes securely by means of bolts. These fittings are made in **Tees** and **Crosses,** so that when it is desired to extend the supports from the floor to the ceiling the Cross fittings are used, otherwise only the Tee fittings are used. We can make these stalls in a number of different styles, permitting of a variation in prices, and while we expect that anyone can determine from the cuts given just what they want, we should take pleasure in giving any assistance in our power to meet special needs along these lines.

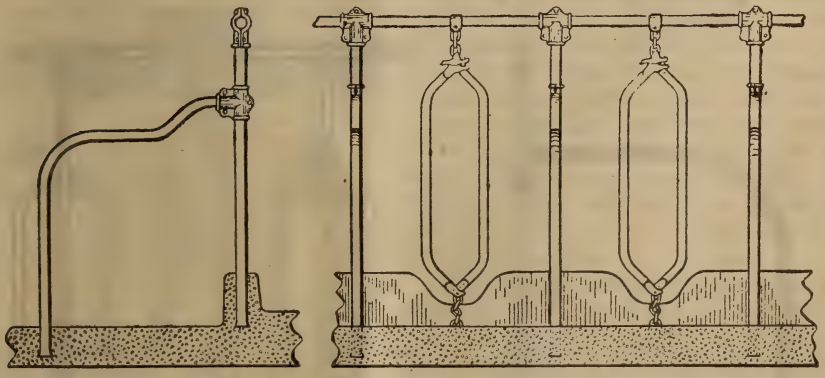


Fig. 796 (Style)

Fig. 796 shows one style of our **sanitary stalls** with **stall partition** and **stanchion supports,** as used with concrete floor and manger. This is a very simple arrangement with an upright support for each partition. When the stalls are to be used on a plank floor the lower ends of the posts are fitted with iron flanges so that they can be securely attached to the floor. We can furnish the complete stalls or only the malleable fittings.

Louden's Sanitary Stalls and Stanchions (Continued)

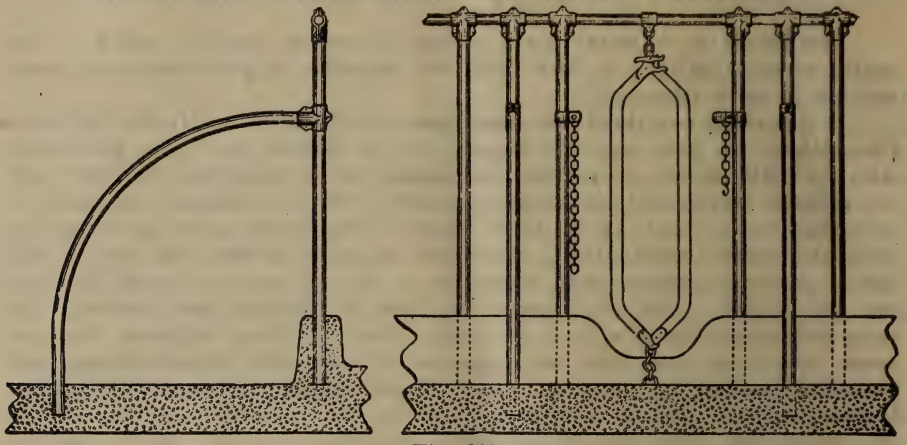


Fig. 810

Fig. 810 shows the rear and side views of another style of Sanitary Stall, showing the **chain attachment** to prevent the cow from lying down when being milked or curried. This style has three upright supports with a **curved partition** coupled to the centre posts.

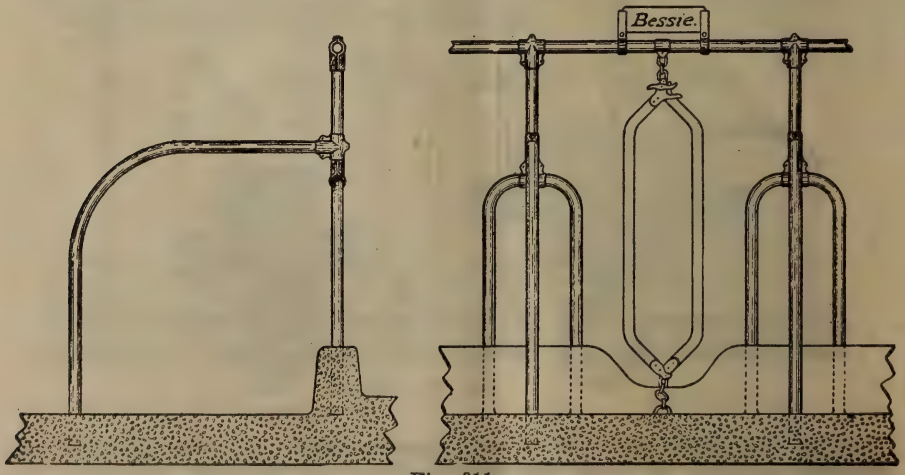


Fig. 811

Fig. 811 is another arrangement showing the stall without the chain attachment, but showing an arrangement for a **name plate.** This stall has **one central post** connected below the partition coupling to **two curved supports** reaching the floor.

Louden's Sanitary Stalls and Stanchions

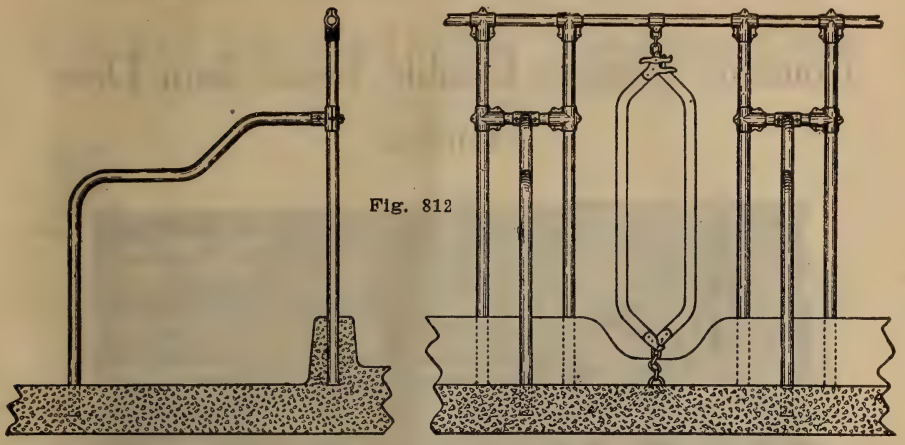


Fig. 812

Fig. 812 shows one more style of Sanitary Stall with **two upright supports,** connected by a **cross bar** to the centre of which the partition is coupled. Any of these stalls, with the exception of 811, can be fitted with the chain attachment to prevent cows lying down, and they all can have the attachment for name plate.

LOUDEN'S TUBULAR COW STANCHIONS

The stanchion has been generally accepted as the best method for fastening cows in a stable. Our stanchions are the best kind of stanchions, being made of **steel tubing** with **malleable iron couplings.** They are simple in construction, and are most practical and durable. There are no pieces to get loose and no sharp corners to injure the cow's neck. They can be opened and closed in the least possible time with one hand, and without taking off the glove or mitten; but the lock is so arranged that it cannot be opened by the cows.

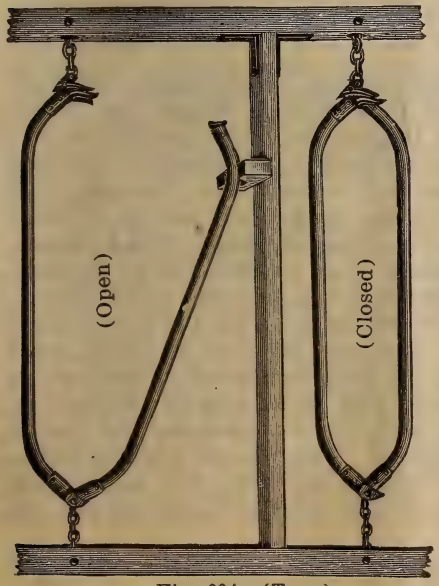


Fig. 694 (Togo)

They are **fastened at top and bottom by chains,** which are very strong and of sufficient length to allow the stanchion to turn freely in any direction, thus doing away with any chance of cramping. This allows the cow to move her head in any direction, and at the same time prevents her from stepping back into the gutter or forward into the manger. The standard size of this stanchion is 4 ft. in height and 7 in. wide. The heifer size is 6 in. wide. When necessary we can also make these stanchions 8 in. wide.

Louden's Flexible Double Tread Barn Door Hangers

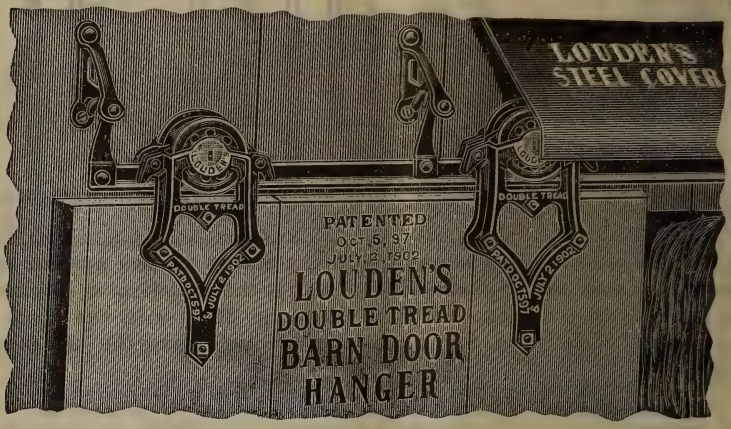


Fig. 458

Fig. 458 is the Barn Door Hanger that has revolutionized the trade during the last few years. It was the **First Flexible Hanger** and it has practically driven all the Old Style Rigid Hangers out of the market—in fact, a Barn Door Hanger to sell now must be flexible, or hinged, or at least "swing out", or something of that nature. A great many hangers, with this idea in view, have lately been put on the market, but not one of these imitations begins to compare with **Louden's Original Double Tread Hanger.** This hanger is in reality two sets of hangers: a set on each side of the door, fitted to run on opposite edges of an inverted T rail, just like a Hay Carrier. The track is flexibly hung to brackets, secured to the wall, and it will adapt itself to the inequalities of the siding. The door can thus be closely fitted and at the same time it will not bind or run hard on account of the warping of the door or the siding as it is apt to do with rigid brackets and hangers. **The track** being a T rail takes up the least possible room and the hanger frame is thereby shortened and strengthened. There is an **absolute centre draft** instead of a side hitch, as with ordinary hangers. The door cannot jump the track, or be hooked, or blown off, but will always stay on and run true and easy.

Louden's Flexible Double Tread Barn Door Hangers

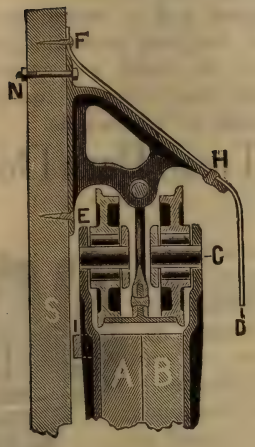


Fig. 453

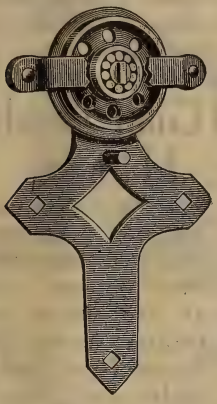


Fig. 454 (Dewey)

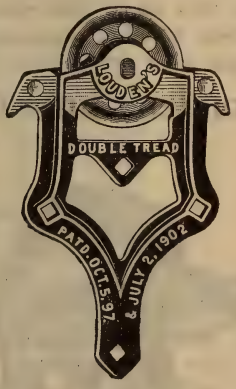


Fig. 554

The brackets, which hold the track, form a solid and continuous support for a cover the whole length of the track, so that it cannot get loose from the wall. Our **patent steel covering** can be let into the wall so as to entirely shut out the rain and snow. A front view of this covering is shown in Fig. 458 and a sectional view in Fig. 453 (F. H. D.). All barn door tracks should be covered. These Hangers are fitted with our **Patent Track Cleaners,** which keep the track clean and prevent obstructions from getting under the wheels.

There are four wheels in place of two to carry the weight of the door and all these wheels are fitted with our **improved roller bearings,** ten turned and tempered steel rollers which revolve around **a turned and tempered steel shaft,** as shown in Fig. 454. This figure is the original pattern of our Double Tread Hanger, of which there are a great number in use.

Fig. 554 is our improved pattern, which is much better and stronger than the old one, and which is the only one we are now manufacturing. No soft iron rivets or wire are used in these roller bearings or axles, and they cost twice as much as those used by the manufacturers of other hangers. A revolvable washer is placed on the shaft at each end of the rollers, to take off the friction against the casing. This makes the easiest turning and most durable roller bearing ever invented. Our patent covers this feature.

Track for Double Tread Hangers

Fig. 452 (Evans)

This track is a **special T rail of high carbon steel** and is warranted to carry the largest door. The hooks and brackets are the best malleable iron and will stand the roughest usage. The sections of the track are securely spliced together and cannot come apart. They are not simply butted together as all other tracks are. This track is made in 6, 8 and 10 ft. lengths.

Louden's Improved Giant Double Tread Barn Door Hangers

Fig. 580 (Schley)

Fig. 581

Fig. 580 is the front view and Fig. 581 is the end view of our improved **Giant Double Tread Barn Door Hanger.** This hanger has all the special features of our regular Double Tread Hanger—the tempered steel roller bearings, centre draft, etc.—but instead of bolting to both sides of the door it is made to bolt to one side, making it very simple and easy to attach to heavy doors. There is a **heavy strengthening web A,** Fig. 581, which fits into a slot cut into the top of the door. This web makes the hanger very strong, and insures an absolute centre draft instead of a side hitch as with ordinary hangers. The door cannot be thrown off the track and will always run true and easy. The thickness of the door makes no difference to this hanger, and on account of the track being flexibly hung to brackets secured to the wall, similar to those used on our standard track, the door will accommodate itself to the inequalities of the siding. The door, therefore, can be closely fitted and at the same time it will not bind or run hard on account of warping, or the walls settling out of shape. **The brackets** which hold the track, **form a solid and continuous support** for a cover the whole length of the track so that it cannot get loose from the wall. If necessary, our **Patent Steel Cover** can be let into the wall to entirely shut out the rain and snow. These hangers are fitted with our **patent Track Cleaners.**

The track for our Giant Hangers is a special T rail of high carbon steel, the same as our Standard Track, Fig. 452, only much heavier. The Giant Hangers and Track are designed and built for heavy warehouse doors, etc. We recommend them for heavy and hard use.

Louden's Jointed Barn Door Hangers

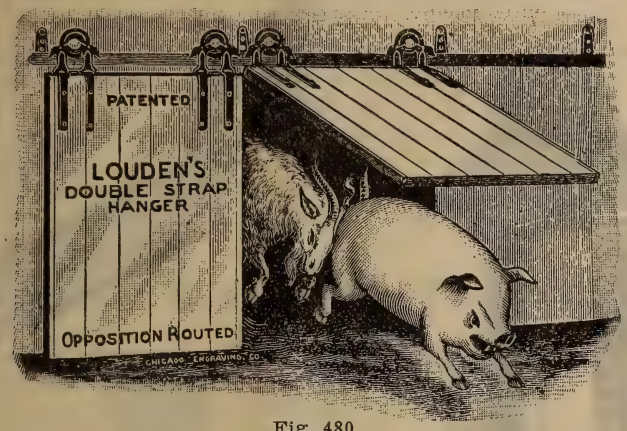


Fig. 480

We make four different styles of jointed hangers—the largest and best line of these hangers on the market. Three of these styles are made of the best malleable iron, with the material where it will make the hanger the strongest, neatest and best. The other is made from High Carbon Stiff Steel. In making our Hangers we use no soft steel, or anything that would bend too easily.

The construction of our hangers gives the door more flexibility at the top than other jointed hangers, and while they are built to hold the door close to the side of the barn an uneven wall does not make them run as hard as some of the others.

All our barn door hangers are neatly packed—one set in a paper box—twelve boxes in a wooden case—with the necessary bolts for attaching the hangers and the rivets for the track, in the box with the hangers.

LOUDEN'S "ALL RIGHT" BARN DOOR HANGERS

The "All-right" Hanger is the latest of our barn door hangers. It is a very strong and compact hanger with a **malleable hood** and a **steel strap** for the door. This steel strap is very wide and bolts to the door with two bolts. There is an oil hole immediately above the axle for oiling the bearings. It is fitted with our **superior roller bearings** as are all our other jointed hangers.

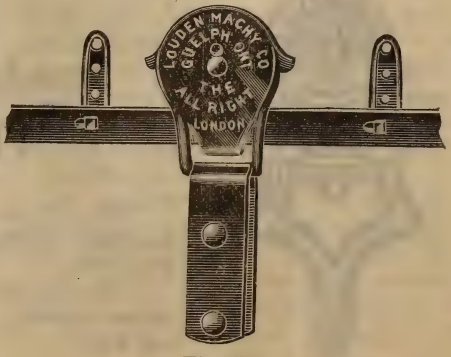


Fig. 508 (Right)

Louden's Double Strap Jointed Hangers

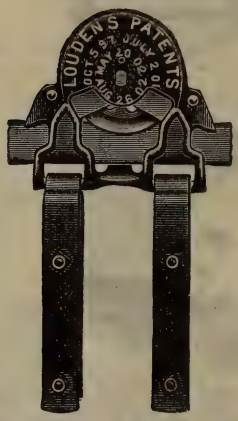


Fig. 566 (Reliance)

Fig. 483

The hood or upper part of this hanger is made of the **best malleable iron,** while the **double straps** which fasten to the doors are made of **high carbon steel.** Fig. 566 is a detached view of this hanger while Fig. 483 is an end view with the door swung out. This hanger is fastened to the door with four bolts and is much stronger and more durable than hangers having a single strap and only two bolts. The hanger frame is made wide with a bearing on each side, which holds the hanger rigid endwise of the door or track, and does away with the end play found in hangers with a single bearing directly under the centre of the wheel. This hanger and our Standard Jointed Hanger are both fitted with our **patent Track Cleaners,** which throw birds' nests and other obstructions off the track.

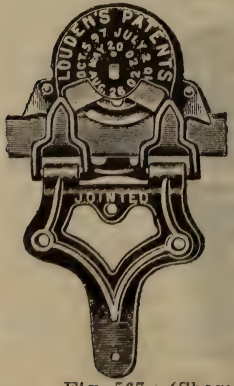


Fig. 567 (Shamrock)

Standard Jointed Hangers

Fig. 567 is a detached view of our **Standard Jointed Hanger** with **malleable hood.**

Fig. 485 is an end view of the same hanger showing the patent strengthening web.

Fig. 485

Standard Jointed Hangers (Continued)

This hanger will work on any thickness of door, is easily attached, and cannot get off the track. It differs from our Double Strap in that the part attached to the door is made of malleable iron. The joints are directly below the outside edge of the wheel, which causes the door to hug the side of the barn closely, while at the same time it gives the door the greatest freedom to be pushed away from the wall when necessary.

Steel King Jointed Hangers

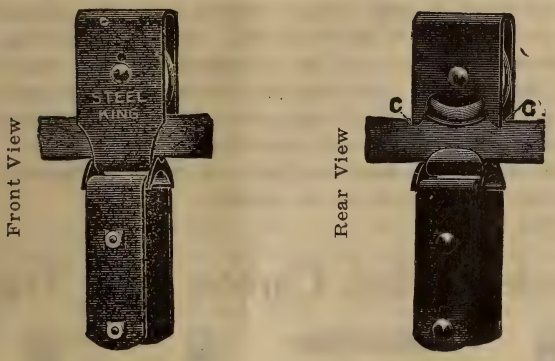


Fig. 559 (Lipton) Fig. 560

This hanger, which is made entirely of high carbon steel, is the latest and best of its class. It is very well proportioned and very symmetrical in appearance. **The casing** forms a cover for the wheel and the points C C Fig. 560, in conjunction with the opposite side, serve as track cleaners to prevent obstructions from getting under the track wheel. It is **roller bearing** and the axle on which the rollers run is so arranged that it cannot turn in the casing. There is an oil hole immediately above the axle for oiling the bearings.

It has a **triangular shaped loop** which supports the door strap at the corners instead of the middle, thus adding to its strength. It has a wide semi-circular bearing which takes up the least amount of space below the track and permits the lower hook to be made wide so as to afford the greatest amount of oscillation on the track. While it has the largest amount of freedom it is an absolute "stay on", and cannot get off the track or bind on it.

Superior Roller Bearings

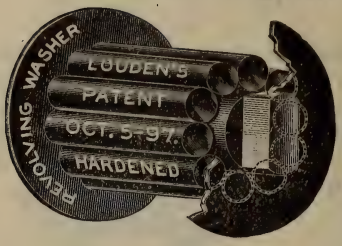


Fig. 19

Fig. 18

Our **Roller Bearings** are of the finest steel, turned perfectly true and tempered. Ten of them in each wheel revolve around a **tempered steel axle.** On each end of this axle, as is shown in Fig. 19, is a **revolving washer** which prevents the friction which would be produced by the ends of the rollers rubbing against the casting, thus making the hanger run easy. Our patent covers this feature. This is the finest roller bearing on the market and no other can compare with it for light running.

The axles on which the bearings run are made of **turned and tempered steel** with shouldered ends to fit in the casing.

Fig. 18 is the axle.

Louden's High Carbon Steel Track

Fig. 487 (Marble)

We use nothing but the very best High Carbon Steel for our track, while others use common Open Hearth Soft Steel, which costs less and is easier to work, but which will not stand the strain or wear of our special High Carbon Steel. We also have by far the **best Brackets,** as shown by Fig. 20. They are made of the best malleable iron, with a strengthening flange on each side and a brace below to keep the track from tilting over, as it would be liable to do without it, as shown in X. These Brackets are mortised through the track and riveted on by hand—no machine work.

Fig. 20

The small amount of space required by the shank of the Bracket leaves plenty of room on the inner side of the track, above and below, to hold the hanger on, thus insuring an absolute "stay on" track.

Louden's High Carbon Steel Track (Continued)

Some manufacturers use a Bracket made of Strap Iron like that shown in Fig. 21. This does not make a reliable "stay on" track because this style of Bracket does not leave enough of the track free for a deep groove wheel above and a sure holding keeper below. It is also very light compared with our Brackets.

Fig. 21

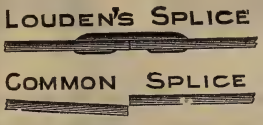


Fig. 22

Last, but not least, the **sections** of the Louden Track **are securely spliced together** and cannot come apart. This splicing is done by a **malleable iron splice,** riveted into the ends. All the other tracks have the ends of the section simply butted together without riveting and the cupping of the siding, or other inequalities of the wall, are liable to cause the ends to fall apart as shown in Fig. 22. With the Louden track this is impossible and the ends of the sections will always be securely held together so as to make a continuous, even track for the hanger, of one solid rail of the whole track, no matter how many pieces have been used. The Splice is riveted to one end of each section before leaving our factory, and the other end is fitted so that connection is easily and quickly made.

Louden's Stay Rollers

Fig. 456. **This Roller** is screwed into the wall to suit the thickness of the door, then the **Brace B** is slipped over the **Rib A** and fastened to the wall by screws or nails. This prevents it from turning and getting the Roller out of place.

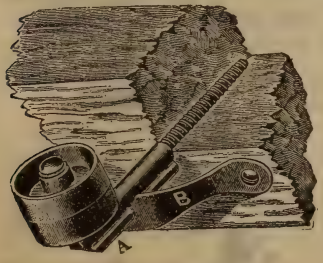


Fig. 456 (Cuba)

Fig. 457. **This Roller** can be adjusted to the thickness of any door, either before or after fastening to the building, by setting one nut.

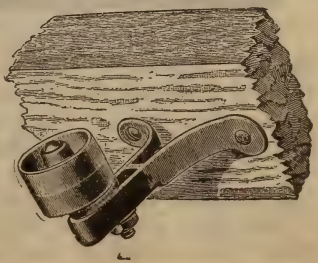


Fig. 457 (Havana)

Louden's Sliding Door Latch

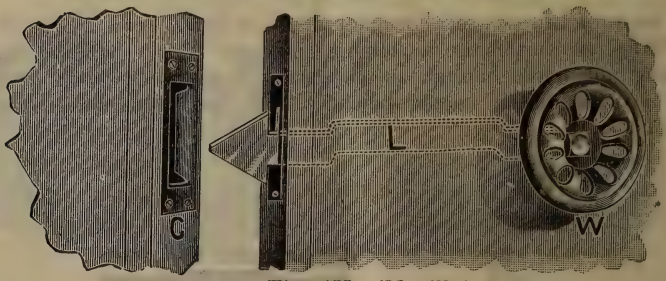


Fig. 455 (Manilla)

Fig. 455 shows our **Sliding Door Latch** which is an extremely neat and easy latch for sliding doors, while it is very strong and safe. The latch is lifted, and the door opened and closed, by the **hand wheel W,** which is generally placed on the outside, while the **central part** (dotted lines L) is bent to form a hand hold on the inside. The **Catch C** has flaring edges to guide the latch into it. **The Latch** is reversible and may be used for right or left hand doors. It is made of malleable iron and it can be used as well on single sliding doors as on double doors.

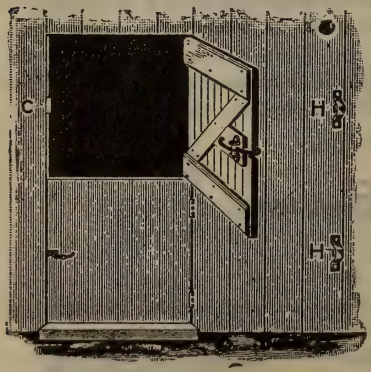
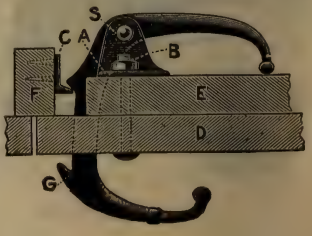


Fig. 496 (Dad)

Double Acting Door Latches

NO MORE DOORS BROKEN BY THE WIND

Fig. 496 shows our **Double Acting Door Latch,** which is an extremely strong and handy latch. It holds the door closed by engaging the **catch C,** which is fastened to the jamb of the door. When the door is open the **Hook G** then catches into the **Bracket H** on the wall, so that if the door should be left unlatched, and begin to swing in the wind, if it swings either shut or open back as far as the wall, it must catch and remain fixed until loosened by the hand. The latch is attached to the door by two bolts and a small groove is cut into the door to let the latch work. The handles of the latch are made with turned ends, so that there is no danger of the harness catching on the latch as horses go in and out of the stable.



Louden's Wagon Rack Fixtures

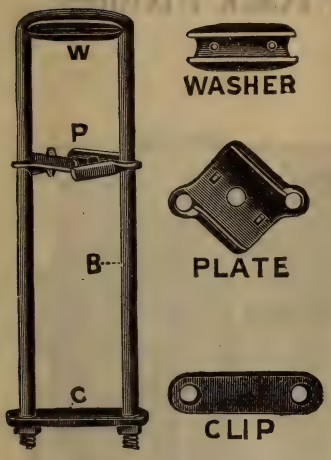


Fig. 555

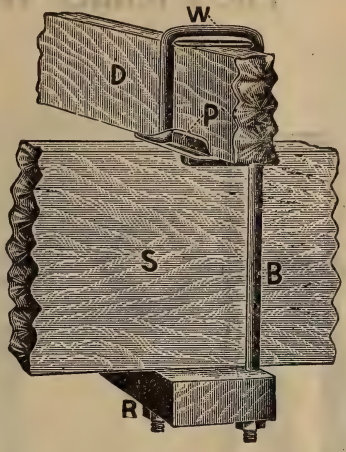


Fig. 555

7-16 x 14 (Fixture); 7-16 x 16 (Firm); 7-16 x 18 (Full)

Fig. 555 shows the **Louden Wagon Rack Fixtures,** by means of which the timbers of the rack are put together and securely held in position without having to bore holes in the sills, or the upper cross pieces. The boring of these holes greatly weakens the timber, besides taking time and labor—all of which is saved by the use of our Rack Fixtures.

The **bearing plates** are fitted with **flanges,** above and below, and also **studs,** above and below, which prevent the timbers from slipping on each other.

A set of these Fixtures consists of 8 Top Washers; 8 Intermediate Plates P; 8 Lower Clip Plates C; 8 U Shaped Clamp Bolts B, which are made of different sizes to fit the different sized timbers. The 14 in. bolts are for 2 x 4 upper cross pieces and 2 x 8 sills: The 16 in. bolts are for 2 x 4 cross pieces and 2 x 10 sills; or 2 x 6 cross pieces and 2 x 8 sills; and the 18 in. bolts are for 2 x 6 cross pieces and 2 x 10 sills. We make these bolts of 7-16 iron. The Intermediate Plates are of best malleable iron; the Clip Plates of good solid steel, and the Top Washers are also of malleable iron, having double the bearing surface of the common Channel Iron Washers, and they are made to fit the bolts.

The Premier Wagon Rack Fixtures

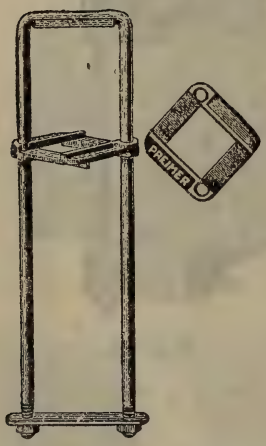


Fig. 556 (Premier)

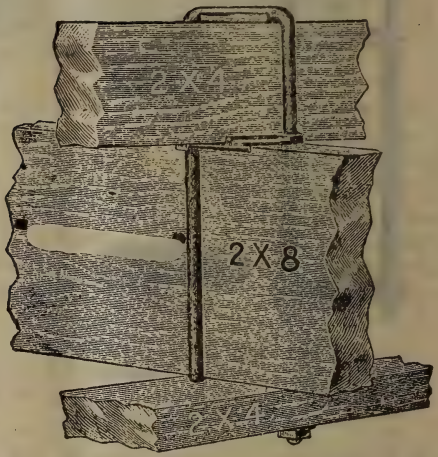


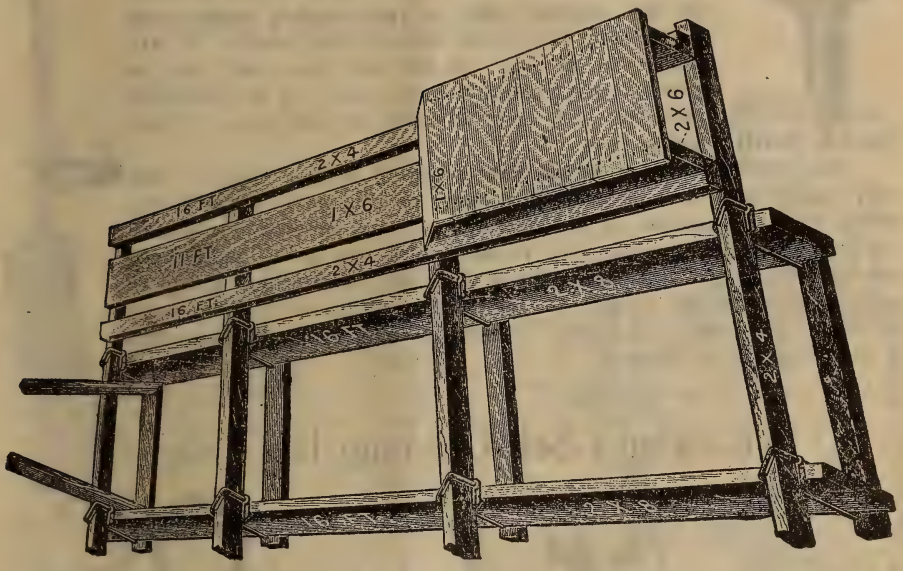
Fig. 556 (Premier)

These Clamps do away with the bolts and nails for bolting racks. There are therefore no holes bored through the Sills or Cross Pieces, the result being a stronger, neater Rack, much more easily built. A set of these Fixtures contains 8 U shaped Bolts either 14 or 16 in. long; 8 Iron Saddles or Plates which have flanged edges to grip the Sill and Cross Piece; 8 Top Washers, grooved above to hold the bolt, and 8 Steel Plates for the under side of the lower Cross Pieces, which not only act as washers, but, by holding two ends of the bolt together, prevent the Cross Pieces sliding under the strain.

These clamps differ from our Louden Wagon Rack Fixtures in that they are of ⅜ iron instead of 7-16, and that the top washer is a piece of channel iron. For ordinary racks they will be found very satisfactory, but where heavy racks are to be built we would decidedly recommend the Louden Wagon Rack Fixtures.

Material for Hay Rack

7 ft. Wide by 16 ft. Long



All 2 in. pieces to be dressed on both sides, making them 1¾ in.
All 1 in. pieces to be dressed on one side.

2 pieces 2 x 8 16 ft. long for Sills.

4 pieces 2 x 4 7 ft. long for Cross Pieces on top of Sills.

2 pieces 2 x 4 8 ft. long for Front Ladder.

4 pieces 2 x 4 16 ft. long for Longitudinal Pieces on top of Cross Pieces.

4 pieces 2 x 4 4 ft. long for Bottom Cross Pieces.

4 pieces 2 x 6 6 ft. long to make Box to cover Rear Wheels.

4 pieces 1 x 6 11 ft. long; two to be cut up for covering for Rear Wheels, and two to go longitudinally in front of wheel covering.

2 pieces 1 x 12 16 ft. long to be used in bottom of Rack (not shown in cut.)

This material is for 14 in. Fixtures. When the 16 in. Fixtures are used the Sills must be 2 x 10, or the Cross Pieces 2 x 8.

Louden's Spade Head and Spade Lift

Fig. 445 (Hayti)

Fig. 445 shows our **Malleable D Head** for Spades, Shovels, Fodder Forks, Furnace Pokers with pipe handles, etc. This is the only D Head in the market with a **split socket made long** enough for two rivets through the handle. It will adjust to fit any handle full size, and can be riveted tight should it work loose. It is practically indestructible as it is made of one piece of Malleable Iron.

Fig. 547 shows our **Spade Lift** attached to the Spade. This Lift makes digging and shovelling easy, as it does away with the strain on the muscles of the lower arm and greatly diminishes fatigue. Those who have used it are loud in its praise and would not do without it for many times its cost. Furnished complete with bolt to fit the handle of any Spade or Shovel. It is made of Malleable Iron, but, when preferred, can be furnished with a wooden Grip or Handle.

Fig. 547 (Holder)

Louden's Self-Opening Ice Tongs

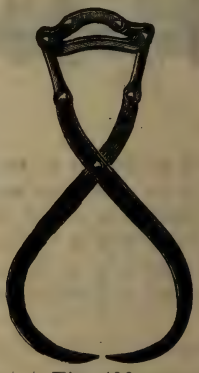


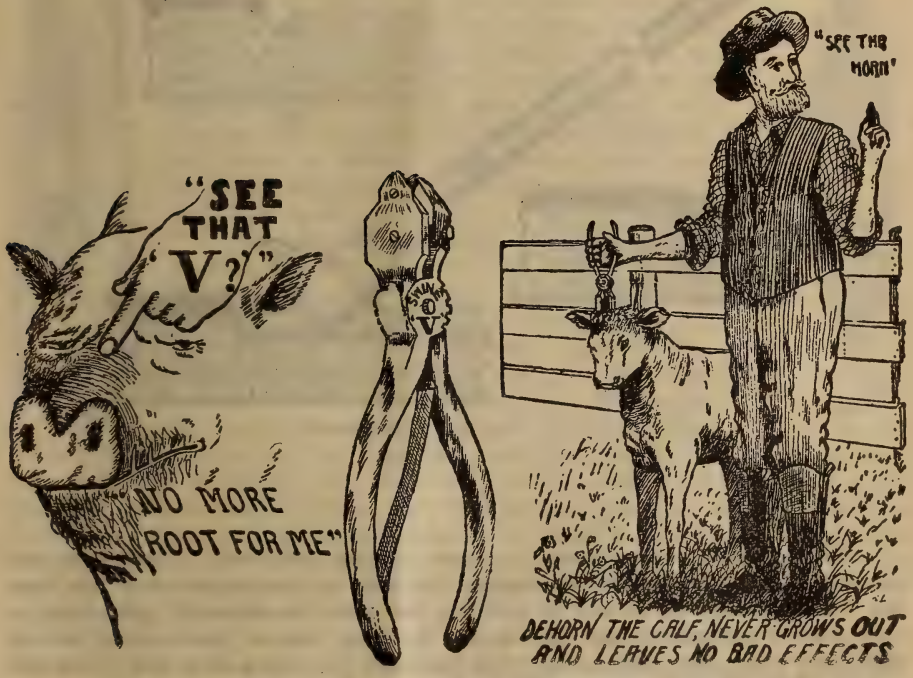
Fig. 426 Fig. 426

13-inch (Cardenas); 17-inch (Matanza)

These are the handiest tongs made, as only one hand is required to operate them. They are very useful for moving small boxes, kegs of nails, etc. Every merchant and iceman, as well as every householder, should have them. They are made of the best **crucible spring steel, with malleable iron handles,** in two sizes 13 in. and 17 in.

Farmer Brighton's
Humane Swine V, Cattle Marker and Dehorner

THREE PRACTICAL INSTRUMENTS IN ONE



This is an article that every farmer ought to have as it will do these three things well. It does away with **ringing swine,** as all that is necessary is to cut a V shaped notch in the cartilage of the snout, which causes the pig no inconvenience at all unless it starts to root, when the notch immediately **becomes very painful.**

For **marking cattle and dehorning calves,** this is most satisfactory.

Louden's Lawn Sod Trimmer

Patent Pending.

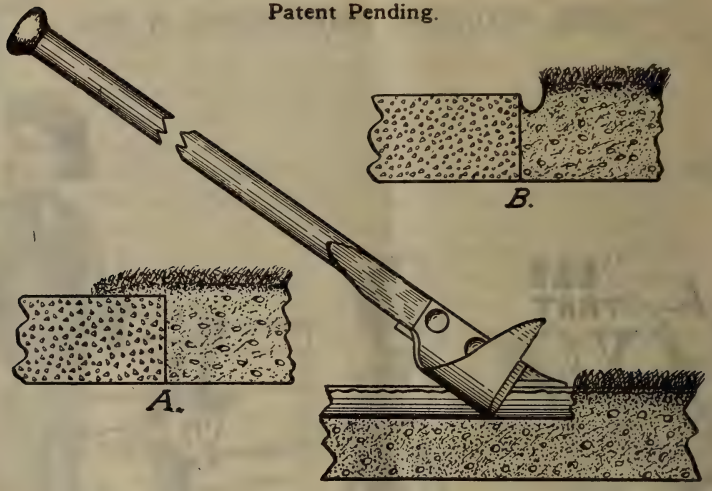


Fig. 816 (Trimmer)

This a handy arrangement to meet a long felt need. In spring and summer a continual trouble in keeping the lawn in good appearance, has been the way the sod will persist in growing out over the sidewalk, presenting a very ragged appearance and preventing the lawn mower from cutting evenly up to the walk. See Section A. This Trimmer will cut a **strip** out of the sod 1 in. in width and 1 in. in depth, as shown in Section B.

It is fitted with a **bevelled point** in front of the cutter which will run under and lift up the overlapping sod or matted grass, so that it can easily be removed by pushing the Trimmer along the walk. Using this Trimmer will add greatly to the appearance of the lawn.

The handle is 1⅛ in. in diameter and 4½ ft. long, and the **knob** on the end makes it easy to operate. **The blade** is made of **mower knife steel** and is easily sharpened with a file or emery stone. This can be done without removing the knife. In every way this is a very strong, cheap and effective tool. Weight about 2 lbs.

Louden's Perfect Wire Stretcher and Hoist

Fig. 448
(Key West)

Louden's Perfect Wire Stretcher is the strongest tackle stretcher made. In tightening the wire, the operator stands **away from the wire** out of danger, instead of close up to it as with other stretchers. The **wire grips** are fitted with **raised flanges** or guards, which absolutely prevent wires from slipping under the eccentric grips. These grips are fitted with handles one-third longer than other stretchers, and have an offset curve, giving more convenience and greater power for setting the grip with the hand.

The **rope grip** is positive and will never fail to grip, and will hold the wire at any tension. The **wire grips** are positive, and will never fail to hold. They are equally satisfactory for stretching barbed or woven wire. The frames of the pulley blocks are made of high grade steel, and the fittings of malleable iron. The chains are extra large and strong. The iron rope sheaves are very smooth to prevent wear on the rope, and turn on special steel thimbles, insuring ease of operation and great strength. The stretcher is reeved with rope ⅜ in. in diameter, and is fitted with a swivel to prevent twisting, and this swivel being placed on the end of the stretcher next to the wire, and away from the post, lets the twist out of the wire but does not allow the stretcher itself to turn and tangle the rope, as stretchers having a swivel next to the post, or a swivel at each end, are apt to do.

Fig. 806
(Mole)

Fig. 448 shows this wire stretcher with its regular attachment.

Fig. 806 is the same fitted with hooks, as a hoist of 400 lbs. capacity. When used as a hoist, the operator is away from the load instead of under it.

Fig. 807 shows it stretching and splicing barbed wire.

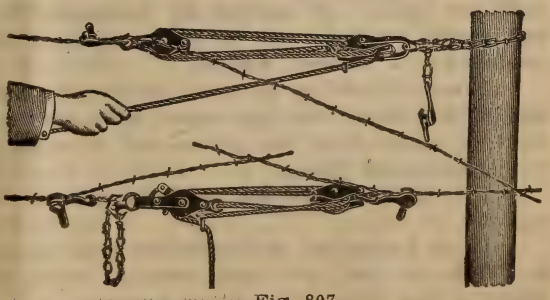


Fig. 807

Lounden's Perfect Wire Stretcher and Hoist

(Continued)

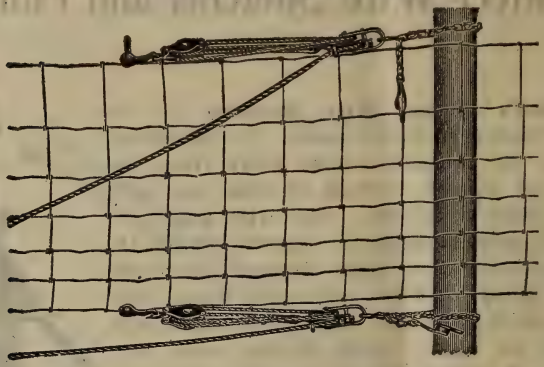


Fig. 808

Fig. 808 shows the same stretching woven wire fence, using two stretchers—one at the top and one at the bottom of the fence.

The Premier Pump

3, 3½ and 4 Inches in Diameter

This pump is made in lengths of 8, 10, 12, 14 and 16 ft., of **Galvanized Steel** and **Malleable Iron Castings,** with seamless **cylinders** of either **Brass** or **Galvanized Iron.**

It is **octagonal** in shape, making it very strong and allowing room for expansion to a circular shape, thus doing away with the danger of bursting by freezing. It is very light and easily handled, and is easily repaired—no tool being needed but a monkey wrench.

There is nothing to split, check or get water soaked, and it will never foul the water, as there is no chance of taint or scales from the pump, and no opening for worms or germs to get into.

The **workmanship** and **material** are of the very best quality.

These pumps are invaluable for wells up to 35 or 40 ft. in depth, as they are light, easy to work, and lift more water to the stroke than other pumps.

Fig. 832
(Pump)

Centre Drive Barn

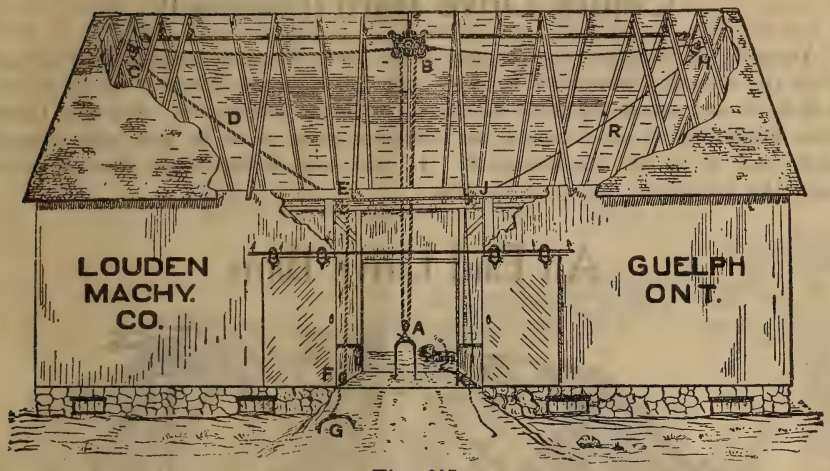


Fig. 607

Fig. 607 shows how our Hay Tools are generally fitted up so as to take the hay from the driveway in the centre of the barn, and deposit it in either end. When the rafters are three feet apart the track should be six feet shorter than the barn, bringing it to the last rafter but one on each side, which is quite close enough. To make it good and strong, a hanger and bracket should be placed on each rafter, and when sling loads are taken up it is better to put a hanger and bracket on both sides of the rafter above the stop block. The pulley hooks should be screwed into a collar beam, Fig. 617, which should be spiked to the last pair of rafters from each end. On these hooks the pulleys C and H are hung. The collar beams may be 2 x 6, or 3 x 4, or 4 x 4, chamfered off thin at the ends, so that they can be properly spiked to the rafters.

Fig. 617

It is a poor plan to screw the hook into one of the rafters, as shown in some hay tool catalogues, because in heavy work it is liable to pull out a single rafter.

In this illustration the draft rope is shown from the car B, through the pulleys C, E and F to whiffletree G. When it is necessary to deposit the load in the other mow, the pulley C, which should be on a pulley changer, is carried to the other end of the barn and put on the hook H. The Draft Rope may then go from B through the pulleys H and J, or from pulley H across to E, and so down to the whiffletree. In this way no climbing will be required after once the carrier is installed.

Centre Drive Barn (Continued)

To get the length of the draft rope: if a Louden Junior Car is used, double the length from A to B, then add the distance from B to C, C to E, and E to F, and allow about 10 ft. extra for the whiffletree G. When a Louden Junior Sling Car is used treble the distance from A to B, and add it to the length from B to the whiffletree G. In the case of the Sling Car, it is well to add the length of the rack to this.

An End Drive Barn

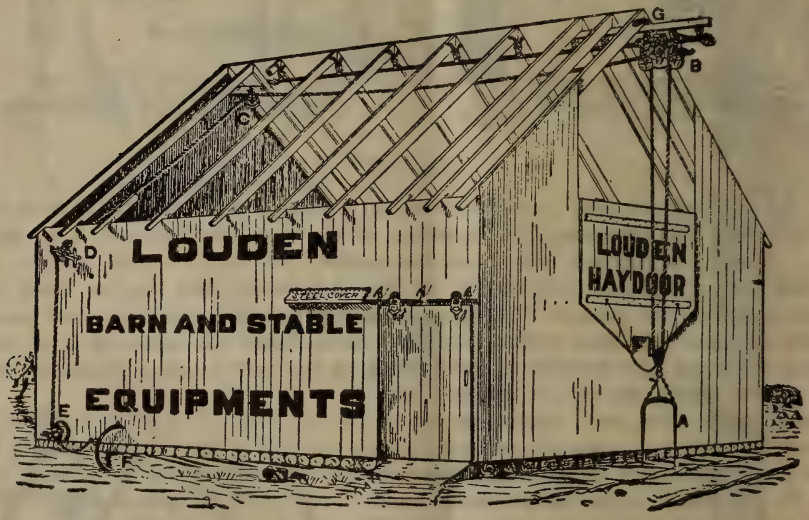


Fig. 608

Fig. 608 shows the barn arranged to take the hay in at one end. The hay door, which is cut high up in the gable, should be large enough to take in the largest forkful without pulling off the loose hay, and thus making a litter. If possible, it is well to make a door from 8 to 10 ft. wide, and 10 to 12 ft. high. While, if slings are used, 2 ft. should be added to both height and width. Of course smaller doors will do, but a larger door will be much more satisfactory.

The track should extend out about 2 ft., and the total length of the track should be about the same as the total length of the barn, the track stopping in the rear of the barn at the last rafter but one, or about three feet from the end. The pulley C can then be put on the end rafter.

An End Drive Barn (Continued)

In using this arrangement care must be taken to support the track, where it extends from the barn, very securely. We would recommend the use of our extension support, and, by using our off-set hinges, the hay door will be most satisfactory, as it can then be easily opened and closed with the carrier. In this case, to get the length of the draft rope, double the distance from A to B, then add the distance from B to C, C to D and D to E, and about 10 ft. more to the whiffletree.

Double End Drive Barn

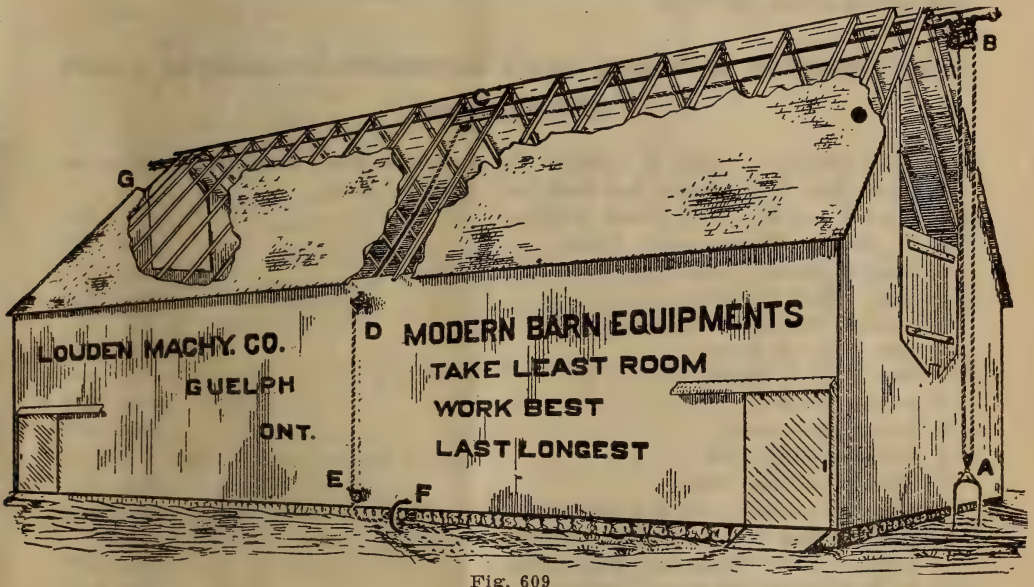


Fig. 609

Fig. 609 represents a barn arranged to take hay in at each end. It has a hay door and track extension at each end. The track runs continuously from one end to the other, and the total length of the track required would be about 4 ft. longer than the barn, in order to provide for the extensions.

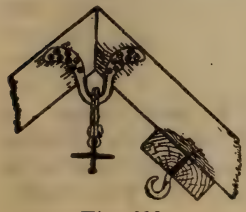


Fig. 628

With a swivel carrier, all that is necessary to reverse it is to run the carrier along the track from one end to the other, and swivel it around. This can be done easily and quickly with the trip rope of the fork or sling. None of the pulleys have to be changed. The outfit requires three draft pulleys, and is a good arrangement for a barn 80 to 100 ft. long. The side collar beam is spiked to two or more of the rafters

at one side of the track, near the middle of the barn at C. This is shown a little more plainly in Fig. 628. This side collar beam must be far enough away from the track to allow the carrier to run by it freely. A hook for the pulley is screwed into this collar beam, and the rope is run down to the side of the barn, where it passes over the pulley D, hung on a bracket pulley holder, and down to pulley E and whiffletree F. In this arrangement a stop block will be required on each end.

To get the length of the draft rope, double the distance from A to B, then add the distances from B to C, C to D, D to E, then allow 10 ft. to the whiffletree. For information concerning the track extensions and hay door, see article about Fig. 608.

Some suggestions as to what would be required for equipping a barn with hay tools.

The following outfit is suitable for a centre drive barn 60 ft. long, as shown in Fig. 607, when a hay fork only is to be used.

1 Louden Junior Steel Track Carrier.....Fig. 430
56 ft. Double Beaded Steel Track.....Fig. 571
20 Louden Rafter Brackets.....Fig. 424
20 Steel Track Hangers.....Fig. 498
1 Louden Double Harpoon Fork.....Fig. 773
2 New 6 in. D Pulleys.....Fig. 495
1 New 6 in. K Pulley.....Fig. 494
4 Pulley Hooks.....Fig. 389
2 Pulley Changers.....Fig. 438
1 Hoisting Singletree.....Fig. 344
1 Lightning Rope Hitch.....Fig. 367

The following outfit is suitable for a Centre Drive Barn 60 ft. long, when a Sling Car and Slings are to be used.

1 Louden Junior Sling Car, steel track.....Fig. 491
56 ft. Double Beaded Steel Track.....Fig. 571
20 Louden Rafter Brackets.....Fig. 424
20 Steel Track Hangers.....Fig. 498
3 Standard Centre Trip Slings.....Fig. 321
2 New 6 in. D Pulleys.....Fig. 495
1 New 6 in. K Pulley.....Fig. 494
4 Pulley Hooks.....Fig. 389
2 Pulley Changers.....Fig. 438
1 Hoisting Singletree.....Fig. 344
1 Lightning Rope Hitch.....Fig. 367

We specify three slings, the number recommended for each wagon. If more wagons are to be used, additional slings should be added. In all cases it is well to have an extra pulley or two, and, where heavy loads are to be lifted, our Mammoth Pulley, Fig. 519, will be better than our New 6 in. Pulley.

If a wood track outfit is needed for either the sling or hay fork outfit, substitute a car for wood track, and put 112 ft. of Angle Track Plating, Fig. 305, 20 Wood Track Hang Hooks, Fig. 371, and 20 C. P. R. Brackets, Fig. 640, in place of the Track Hangers and Brackets given.

Of course, in different lengths of barns different lengths of track will be required. In each case about 4 ft. less track than the length of the barn.

The following outfit is suitable for an end drive barn 50 ft. long, as shown in Fig. 608.

1 Louden Junior Car, steel track.....Fig. 430
50 ft. Double Beaded Steel Track.....Fig. 571
18 Steel Track Hangers.....Fig. 498
18 Louden Rafter Brackets.....Fig. 424
1 Louden Double Harpoon Fork.....Fig. 773
3 New 6 in. D Pulleys.....Fig. 468
1 Extension Support.....Fig. 380
1 Bracket Pulley Holder.....Fig. 348
2 Floor Hooks.....Fig. 389
1 Hoisting Singletree.....Fig. 344
1 Lightning Rope Hitch.....Fig. 367

If a wood track outfit is wanted, substitute the Louden Junior Car Wood Track, Fig. 441, and 100 ft. of Angle Track Plating, Fig. 305, 18 Straight Hang Hooks, Fig. 371, and 18 C. P. R. Brackets, Fig. 640, in place of the steel track and hangers.

The following outfit is suitable for a Double End Drive Barn 80 ft. long, as shown in Fig. 609.

1 Louden Junior Car, steel track.....Fig. 430
84 ft. Double Beaded Steel Track.....Fig. 571
30 Steel Track Hangers.....Fig. 498
30 Louden Rafter Brackets.....Fig. 424
1 Louden Double Harpoon Fork.....Fig. 773
3 New 6 in. D Pulleys.....Fig. 468
2 Floor Hooks.....Fig. 389
2 Extension Supports.....Fig. 380
1 Bracket Pulley Holder.....Fig. 348
1 Hoisting Singletree.....Fig. 344
1 Lightning Rope Hitch.....Fig. 367
1 Extra Stop Block for Louden Junior Car.

If a wood track outfit is wanted, substitute a Louden Junior Wood Track Carrier, Fig. 441, 176 ft. Angle Track Plating, Fig. 305, 30 Straight Hang Hooks, Fig. 371, and 30 C. P. R. Brackets, Fig. 640.

In any of these outfits where Louden Junior Car and Double Harpoon Fork are mentioned, if Slings are desired, the Louden Junior Sling Car and 3 Standard Centre Trip Slings, can be substituted. If more than one wagon is to be used, additional slings would be required.

The following will be necessarry for a Cross Draft Outfit in a 60 ft. barn.

1 Cross Draft Carrier.....Fig. 817
54 ft. of Double Beaded Steel Track.....Fig. 571
20 Steel Track Hangers.....Fig. 498
20 Rafter Brackets.....Fig. 424
8 New 6 in. D Pulleys.....Fig. 468
6 Rafter Pulley Hooks.....Fig. 390
2 Floor Pulley Hooks.....Fig. 389

To get correct length of draft rope, multiply distance from floor to peak of barn by three, and add 20 ft.

To get right amount of shift rope multiply length of barn by two; also distance from floor to peak by two, and add 20 ft. If extra rope is used out in yard, make this the length of longest mow, with half the width of driveway added. If not, add this length to total length of shift rope.

Five-eighths is best for the shift rope. Three-quarters will answer, but is more expensive, and being heavier makes the carrier harder to draw back. Do not use heavier than seven-eighths for draft ropes.

Putting up Hay Carrier Track

When a barn is being built, and when the sheeting is within a couple of feet of the comb of the roof, is the best time to install a Hay Carrier Track. At this time it is an easy matter to do the work, as the sheeting forms all the scaffold necessary; while to install the Hay Carrier Track, after the barn is finished, means doing the work from below by a scaffold or ladder.

The track may be hung perfectly level, or it may be given a slight incline—making it lower at the point where the Stop Block is attached and hay is elevated. The track should always be hung straight and true, and as close as possible to the peak of the barn, only allowing room enough below the rafters for the Carrier to run freely. The best plan is to stretch a line from one end of the barn to the other, immediately below the peak of the rafters, and to nail the rafter brackets to the rafters by this line.

The track should be taken up in sections and hung to the brackets, and then spliced together. Where the rafters are 3 ft. apart, a hanger and bracket should be put on every rafter. Where they are only 2 ft. apart, for light work the brackets might be put on every second rafter; but for heavy work they should be put on every rafter. It is always better to put a bracket and hanger on each side of the rafter, above the stop block.

The bolts in the hangers and brackets should be drawn up as tight as possible with a wrench, and then the head of the bolt should be struck with a hammer so as to set it. The nuts can then be tightened a little more. When this is done they will not work loose.

Our Location and Railway Facilities

Our factory is situated at Guelph, in Central Ontario, about fifty miles from Toronto, in the centre of one of the finest agricultural sections in the country. Our City is the home of the well-known Ontario Agricultural College, which includes among its students young men from nearly every country in Europe, from India, South Africa, Japan, Australia, New Zealand, the Argentine Republic, and many sections of the United States, besides every province in Canada. We also have the famous Macdonald College, which draws its students not only from our own country, but from the Old Lands as well. Our educational facilities are the very best, and we own all our public utilities. Guelph is also the home of the Winter Fair.

For railway accommodation we can be equalled by few places. We are on the main line of the Grand Trunk Railway, going both East and West, and North and South, and of the Guelph and Goderich Railway, while the main line of the Canadian Pacific Railway is just a few miles from us, and is connected with the city by a branch line with an excellent service. This insures prompt delivery of our goods.

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